SITE INVESTIGATION REPORT – FOCUSED & REMEDIATION OBJECTIVES REPORT

Volume I of II

900 West 18th Street
Chicago, Illinois

Prepared For:

The Retirement Program of Farley Inc.
c/o Liam Ventures Inc.
233 South Wacker Drive, Ste. 2150
Chicago, Illinois 60606
Attn.: David Henriksen, Esq.

Prepared By:

Pioneer Environmental, Inc.
1000 North Halsted Street, Suite 202
Chicago, Illinois 60622
(312) 587-1021

Date Submitted:

August 27, 2001

Pioneer Project # 00868C

The following personnel have prepared and/or reviewed this report.

Wayne Smith, P.G.
Environmental Services Director

Charity Simpson, P.E.
Project Manager

Pioneer Project Number: 00868C

Date: August 27, 2001

CONTENTS

CONTENTS (continued)

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES:

1.0 INTRODUCTION

1.1 Site Investigation Objectives

Pioneer Environmental, Inc. (Pioneer) was contracted by The Retirement Program of Farley Inc. to conduct subsurface investigation activities and provide Illinois Environmental Protection Agency (IEPA) reporting services for the subject site located at 900 West 18th Street, Chicago, Illinois (Figure 1; Appendix A). The purpose of the subsurface investigation was to fully characterize the recognized environmental conditions (RECs) previously identified at the subject site by Pioneer while conducting a Phase I Environmental Site Assessment (ESA). The subsurface investigation was performed in accordance with 35 Illinois Administrative Code (IAC) Section 740.430—Focused Site Investigation. This *Site Investigation Report—Focused & Remediation Objectives Report* is intended to summarize the subsurface investigations completed at the subject site to date. This work is being conducted to determine the degree of remedial action to comply with applicable regulations and obtain a No Further Remediation (NFR) Letter for the subject site pursuant to 35 IAC 740.430 and 415 ILCS 5/58.10.

1.2 Background Information

The subject site is comprised of two parcels. Parcel #1 is currently occupied by a partial three-story building with a partial basement (subject building; Figure 1). Parcel #2 is an asphalt-paved parking lot located directly east from Parcel #1 and across Peoria Street. The subject property is occupied by Tool and Engineering Company, a manufacturer of prototype automobile parts. Pioneer was previously contracted to perform a Phase I ESA at the site and subsequently issued a report dated December 7, 2000. The following RECs were noted during the Phase I ESA:

REC-1: The historical presence of "white lead" and paint manufacturing facilities on Parcel #1 as early as 1886;

REC-2: The long-term occupancy (circa 1888 to 1940s) of Parcel #1 by the National Lead Company, a lead reclamation facility;

REC-3: The historical casting/foundry operations conducted on Parcel #1 (1940s), the reported explosion and fire that occurred in 1985, and the reported observations indicating that "black sands" may have been buried on-site;

REC-4: The documented former presence of numerous UST systems that were removed from Parcel #1 during building demolition in 1985 and in 1986 and the documented presence of a former leaking gasoline UST on-site in 1984.

REC-5: The permit records reviewed indicating that a "tank" (size and contents unknown) and a 5,000-gallon fuel oil UST were installed at Parcel #2 in 1943 and 1949, respectively, and the lack of specific information regarding their status.

REC-6: The lack of specific information currently available regarding the subject property's CERCLIS-NFRAP listing.

Pioneer was subsequently contracted to conduct a subsurface investigation to address the RECs. The scope of the subsurface investigation included soil and groundwater sampling and analytical testing in each of the areas of concern and a geophysical survey of certain areas to investigate the potential presence of USTs in Parcel #2. To note, further information was reviewed with regard to REC-6. It was discovered that the CERCLIS-NFRAP listing was associated with the manufacturing processes of Southern White Lead Company and National Lead Industries. Thus REC-6 can be grouped with RECs 1 and 2.

1.3 Contaminants of Concern

Based on the above RECs and in accordance with 35 IAC Part 740, the following contaminants of concern (COCs) were specifically identified for the subject site:

- Volatile Organic Compounds (VOCs)
- Semi-Volatile Organic Compounds (SVOCs) including acid extractable compounds (acids), base/neutral extractable compounds (base/neutrals) and polynuclear aromatic hydrocarbons (PNAs)
- Priority Pollutant Total Metals
- Total Cyanide

2.0 SITE CHARACTERIZATION

2.1 Site Description

The subject site consists of two separate parcels, encompassing a total area of approximately 203,000 square feet. Parcel #1 encompasses approximately 153,000 square feet and is improved by a partial three-story commercial facility (with a partial basement (subject building). The remaining surface area of this parcel (far western portion) consists of concrete or asphalt-paved areas. Parcel #2 encompasses approximately 50,000 square feet and currently consists of an asphalt-paved parking lot and storage area for casting equipment related to manufacturing automobile parts.

The Property Index Number and Legal Description for the subject site are as follows:

Property Index Numbers: Parcel 1: 17-20-404-028-000

Parcel 2: 17-20-405-010-000
17-20-405-011-000
17-20-405-012-000
17-20-405-013-000
17-20-405-014-000
17-20-405-015-000
17-20-405-018-000
17-20-405-035-000
17-20-405-039-000
17-20-405-041-000

Legal Descriptions:

Parcel 1:

THAT PART OF THE WEST 1/2 OF LOT 14 IN THE ASSESSOR'S SUBDIVISION OF THE NORTH QUARTER OF THE SOUTHEAST 1/4 OF SECTION 20, TOWNSHIP 39 NORTH, RANGE 14, EAST OF THE THIRD PRINCIPAL MERIDIAN, BOUNDED AND DESCRIBED AS FOLLOWS: COMENCING AT THE SOUTHEAST CORNER OF THE WEST 1/2 OF SAID LOT 14, THENCE RUNNING WEST ALONG THE NORTH LINE OF 18TH STREET, 143 FEET TO THE EAST LINE OF THE PREMISES HERETOFORE CONVEYED TO THE CHICAGO, BURLINGTON AND QUINCY RAILROAD; THENCE NORTH A DISTANCE OF 150 FEET ALONG SAID LINE; THENCE EAST ALONG A LINE 150 FEET NORTH OF AND PARALLEL18TH STREET A DISTANCE OF 143 FEET TO THE EAST LINE OF SAID TRACT; THENCE SOUTH 150 FEET TO THE PLACE OF BEGINNING, IN COOK COUNTY, ILLINOIS.

AND

LOTS 1 TO 25 (BOTH INCLUSIVE) IN BARRETT'S SUBDIVISION OF THE EAST 1/2 OF LOT 14 IN ASSESSOR'S DIVISION OF THE NORTH QUARTER OF THE SOUTHWEST 1/4 OF SECTION 20, TOWNSHIP 39 NORTH, RANGE 14, EAST OF THE THIRD PRINCIPAL MERIDIAN, TOGETHER WITH THE VACATED ALLEYS LYING SOUTH OF LOTS 1 TO 5, WEST OF LOTS 6 TO 29 AND NORTH OF LOTS 21 TO 25 IN BARRETT'S SUBDIVISION, AFORESAID, ALL IN COOK COUNTY, ILLINOIS.

AND

THE WEST 1/2 OF LOT 14 IN ASSESSOR'S SUBDIVISION OF THE NORTH QUARTER OF THE SOUTHEAST 1/4 OF SECTION 20 (EXCEPT THAT PART LYING SOUTH OF A LINE 150.00 FEET NORTH OF AND PARALLEL WITH THE NORTH LINE OF 18TH STREET, EXCEPT THAT PART HERETOFORE CONVEYED TO BURLINGTON NORTHERN INC.) IN TOWNSHIP 39 NORTH, RANGE 14, EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

Parcel 2:

THE SOUTH 166 FEET, 3 INCHES OF LOT 15 IN ASSESSOR'S SUBDIVISION OF THE NORTH QUARTER OF THE SOUTHEAST 1/4 OF SECTION 20, TOWNSHIP 39 NORTH, RANGE 14, EAST OF THE THIRD PRINCIPAL MERIDIAN, AND THE SOUTH 1/2 OF LOT 16 IN ASSESSOR'S SUBDIVISION AFORESAID (EXCEPTING FROM SAID LOTS 15 AND 16 THAT PART TAKEN FOR 18TH STREET) ALL IN COOK COUNTY, ILLINOIS.

AND

LOT 45 (EXCEPT THE EAST 3 INCHES THEREOF AND EXCEPT THE SOUTH 33 FEET THEREOF) AND LOT 46 (EXCEPT THE SOUTH 33 FEET THEREOF) IN GEORGE ROTH'S SUBDIVISION OF BLOCK 17 OF ASSESSOR'S DIVISION OF THE NORTH QUARTER OF THE SOUTHEAST 1/4 OF SECTION 20, TOWNSHIP 39 NORTH, RANGE 14, EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

AND

LOTS 2 AND 3 IN LOUIS HOEFKES SUBDIVISION OF THE NORTH 1/2 OF THE NORTH 1/2 OF THE SOUTH 1/2 OF BLOCK 15 AND LOT 28 (EXCEPT THE SOUTH 16.2 FEET THEREOF) IN BARRETT'S SUBDIVISION OF THE EAST 1/2 OF BLOCK 14, ALL IN ASSESSOR'S DIVISION OF THE NORTH QUARTER OF THE SOUTHEAST 1/4 OF SECTION 20, TOWNSHIP 39 NORTH, RANGE 14, EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

AND

LOTS 26 AND 27 AND THE SOUTH 16.2 FEET OF LOT 28 IN BARRETT'S SUBDIVISION OF THE EAST 1/2 OF LOT 14 IN ASSESSOR'S DIVISION OF THE NORTH QUARTER OF THE SOUTHWEST 1/4 OF SECTION 20, TOWNSHIP 39 NORTH, RANGE 14, EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

AND

LOT 1 (EXCEPT THAT PART LYING SOUTH OF THE NORTH 27 FEET 1/2 INCH THEREOF) IN LOUIS HOEFKE'S SUBDIVISION OF THE NORTH 1/2 OF THE NORTH 1/2 OF THE SOUTH 1/2 OF BLOCK 15 AND LOT 28 (EXCEPT THE SOUTH 16.2 FEET THEREOF) IN BARRETT'S SUBDIVISION OF THE EAST 1/2 BLOCK 14 ALL IN ASSESSOR'S DIVISION OF THE NORTH QUARTER OF THE SOUTHEAST 1/4 OF SECTION 20, TOWNSHIP 39 NORTH, RANGE 14, EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

Underground utilities such as natural gas, telephone, water and sewer enter Parcel #1 from Peoria Street at the east property boundary. Electric service is provided via overhead lines.

The subject site is located in a mixed-use area in Chicago. According to the 1999 Chicago Zoning Ordinance, the subject site and some surrounding sites are located in a Restricted Manufacturing District (zoned "M1-2") and the remaining adjacent sites are located in a General Residence District (zoned "R-4"). The following provides a summary of the adjacent properties noted during the site inspection.

Parcel #1:

North: Parcel #1 is bounded by 16th Street to the north and farther north by an elevated railroad embankment.

East: Parcel #1 is bounded by Peoria Street to the east. Farther east is Parcel #2.

South: Parcel #1 is bounded by 18th Street to the south, beyond which are commercial/industrial and residential structures.

West: Parcel #1 is bounded by railroad tracks and associated easements to the west.

Parcel #2:

North: To the north of Parcel #2 is a single family home and farther north is a commercial building.

East: Parcel #2 is bounded by residential properties to the east. Farther east is Newberry St.

South: Parcel #2 is bounded by 18th Street to the south, beyond which are commercial/industrial and residential structures.

West: Parcel #2 is bounded bounded by Peoria Street to the west. Farther west is Parcel #1.

2.2 Sampling Plan

Given the historical information reviewed and the findings of Pioneer's Phase I ESA, an initial sampling plan was developed and implemented. Based on the analytical results and field indications, a subsequent sampling plan was developed. Any "hot spots" of contamination identified during this subsurface investigation work were further delineated to the extent practicable. The following table provides a summary of the analyses completed on each soil and groundwater sample. Figure 2 depicts the location of each REC in relation to the soil borings and groundwater monitoring wells.

Table 2.1

Summary of Laboratory Analysis

LOCATION	VOCs	Acids	Base/ Neutrals	Carbazole	PNAs	BTEX	TPH	Priority Pollutant Total Metals	Total RCRA 8 Metals	Various Total Metals	SPLP Metals	TCLP Lead	pH
B-1 (0-3)	X								X	X-Zn			X
B-2 (2-4)	X	X	X		X			X		X-CN			X
B-3 (6-9)	X								X	X-Zn			X
B-4 (9-12)	X	X	X		X				X	X-Zn			X
B-5 (6-9)	X	X	X		X			X		X-CN			X
B-6 (3-6)	X	X	X		X				X	X-Zn		X	X
B-7 (6-9)	X	X	X		X				X	X-Zn			
B-8 (6-9)	X								X	X-Zn			X
B-9 (6-9)	X	X	X		X				X	X-Zn			X
B-10 (6-9)	X	X	X		X				X	X-Zn		X	X
B-11 (6-9)	X	X	X		X			X		X-CN			X
B-12 (3-6)								X		X-CN			X
B-12 (6-9)	X	X	X		X								
B-13 (3-6)					X	X			X				X
B-15 (9-12)					X	X							
B-16 (6-9)					X	X							
B-17 (0-3)	X	X	X		X				X				X
B-17 (6-9)					X				X		X-Se		X
B-18 (0-3)	X	X	X		X				X				X
B-18 (8-10)					X				X		X-Hg		X
B-19 (0-3)	X	X	X		X				X		X		X
B-19 (3-6)	X				X				X		X-Pb, Ag	X	X
B-20 (0-3)	X	X	X		X				X		X-Ba, Cd, Pb,		X
B-20 (6-9)	X				X								
B-21 (0-3)	X	X	X		X				X				X
B-21 (6-9)	X				X		X		X				X
B-22 (0-3)	X	X	X		X				X				X
B-22 (6-9)	X				X								
B-23 (0-3)	X	X	X		X				X				X
B-23 (6-9)	X		X		X				X				X
B-24 (0-3)	X	X	X		X				X				X
B-24 (6-9)	X				X				X				X
B-25 (0-3)	X	X	X		X				X				X
B-25 (6-9)		X			X								
B-27 (0-3)	X	X	X		X				X				X
B-27 (6-8)	X				X				X				X
B-29 (0-3)	X	X	X		X				X				X
B-29 (6-9)	X				X		X		X				X
B-29 (14-15)	X												

Table 2.1 (continued)

Summary of Laboratory Analysis

LOCATION	VOCs	Acids	Base/ Neutrals	Carbazole	PNAs	BTEX	TPH	Priority Pollutant Total Metals	Total RCRA 8 Metals	Various Total Metals	SPLP Metals	TCLP Lead	pH
B-30 (2-4)		X			X								
B-31 (4-6)		X			X								
B-32 (0-3)	X	X	X		X				X				X
B-32 (9-12)	X		X		X				X				X
B-33 (0-3)	X	X	X		X				X				X
B-33 (6-9)	X		X		X				X				X
B-34 (0-3)	X	X	X		X				X				X
B-34 (9-12)					X	X							
B-35 (0-3)	X	X	X		X				X				X
B-35 (6-9)					X	X							
B-36 (6-9)					X	X							
B-37 (6-9)	X												
B-38 (6-9)	X						X						
B-39 (3-6)			X										
B-40 (3-6)			X										
B-40 (6-9)			X										
B-41 (3-6)			X										
B-41 (6-9)			X										
B-42 (3-6)			X										
B-42 (6-9)			X										
B-43 (0-3)			X										
B-43 (3-6)			X										
B-44 (6-9)			X										
B-45 (6-9)			X										
B-46 (3-6)										X-Pb		X	
B-47 (0-3)												X	
B-47 (3-6)										X-Pb		X	
B-47 (6-9)												X	
B-48 (3-6)												X	
B-49 (3-6)												X	
B-50 (0-3)												X	
B-50 (3-6)												X	
B-50 (6-9)												X	
B-51 (0-3)												X	
B-51 (3-6)												X	
B-51 (6-9)												X	
B-52 (0-3)				X									
B-53 (0-3)				X									
B-54 (0-3)				X									
B-55 (0-3)				X									

Table 2.1 (continued)

Summary of Laboratory Analysis

LOCATION	VOCs	Acids	Base/ Neutrals	Carbazole	PNAs	BTEX	TPH	Priority Pollutant Total Metals	Total RCRA 8 Metals	Various Total Metals	SPLP Metals	TCLP Lead	pH
B-56 (3-6)												X	
B-57 (3-6)												X	
B-58 (3-6)												X	
B-60 (3-6)												X	
B-61 (3-6)												X	
B-62 (3-6)												X	
B-63 (3-6)												X	
B-64 (3-6)												X	
B-65 (3-6)												X	
B-66 (3-6)												X	
B-67 (3-6)												X	
MW-1	X	X	X		X			X					
MW-2	X	X	X		X			X					
MW-3	X	X	X		X			X					
MW-4	X	X	X		X			X					

Notes:
Ag-Silver
Ba-Barium
Cd-Cadmium
CN-Cyanide
Hg-Mercury
Pb-Lead
Se-Selenium
Zn-Zinc
BTEX-Benzene, Toluene, Ethylbenzene, and total Xylenes
TPH-Total Petroleum Hydrocarbons
SPLP-Synthetic Precipitation Leaching Procedure
TCLP-Toxicity Characteristic Leaching Procedure

2.3 GPR Survey/Exploratory Excavation

Due to the historical documentation which indicated that two USTs were previously installed in Parcel #2 (parking lot), and since there was no information as to where these tanks were located, Pioneer contracted STS Consultants, Ltd. (STS) to conduct a ground penetrating radar (GPR) and time-domain electromagnetic (TDEM) survey over Parcel #2 in an effort to locate any USTs that may still be present on the subject site.

On March 1, 2001, STS conducted the GPR/TDEM survey and the results revealed a single anomaly that, based on STS's professional opinion, appeared to be representative of a UST. Pioneer conducted focused probing in this area using a solid rod with a pointed tip and hit an obstruction at the depth a UST would typically be buried. Based on this data, exploratory excavation was conducted in this area on April 12, 2001. The exploratory excavation revealed that the object observed during the GPR/TDEM survey was a remnant foundation of a former building; thus, no evidence of current USTs were found during the subsurface investigation activities.

2.4 Soil Boring Advancement and Sampling

Between December 21, 2000, and June 20, 2001, Pioneer mobilized subsurface drilling equipment and OSHA-certified personnel to the subject site and advanced a total of 67 soil borings in specific areas throughout the site (Figure 1). The sampling plan was based on the RECs outlined in Pioneer's Phase I ESA, the layout of the subject site, and practical/spatial considerations.

Soil samples were obtained using a truck-mounted hydraulically driven sinker drill or a manual jackhammer-powered sinker drill, both of which were used to advance a stainless steel barrel-sampler lined with an acetate sleeve. The soil samples obtained from each interval were logged according to their predominant geological characteristics then divided into two representative portions. One portion of each sample was packed directly into pre-labeled, laboratory-provided

containers; designated for possible analysis; and stored in a cooler on ice to preserve the integrity of the sample. The remaining portion of each sample was sealed in a pre-labeled plastic bag and set aside to be field screened.

After a sufficient amount of time had elapsed to allow the soil samples sealed in the plastic bags to equilibrate to the surrounding air temperature, they were field screened using either a Photovac MicroFID™ IS-3000 flame ionization detector (FID) or a Photovac MicroTip™ photoionization detector (PID). These devices are sensitive to a variety of VOCs and SVOCs and provide a qualitative indication of the relative concentrations of these compounds in the soil samples by measuring the amount of VOCs/SVOCs trapped in the headspace of the bags.

Soil samples were selected for analysis based on the scope of work, FID/PID readings and judgment of the Project Engineer. The samples were stored in a cooler on ice in the field, shipped overnight to an independent laboratory under standard chain of custody procedures, and submitted for the analysis of one or more of the following: VOCs, BTEX, acids, base/neutrals PNAs, TPH, various total, SPLP, and TCLP metals, total organic carbon (TOC) and/or pH. All analytical tests were performed in accordance with accepted US EPA Test Methods. A complete protocol for subsurface soil sampling is provided in Appendix C and a photographic log is included in Appendix D.

2.5 Monitoring Well Installation and Sampling

On March 9, 2001, Pioneer installed four groundwater monitoring wells at the subject site to assess the overall groundwater condition. The construction of the wells, including the location of the slotted screen, was determined from the water levels observed during the drilling activities. In order to account for fluctuations in the water table, the top of the slotted screen was set a minimum of one foot above the estimated water level. The wells were constructed of 10 feet of 2-inch diameter PVC slotted screen set approximately 15 feet below surface grade and 5 feet of PVC riser. The wells were finished at grade with a protective flush-mount well box.

Following installation of the wells, an elevation survey was conducted to obtain relative top of well casing elevations at each well location. An arbitrary site datum of 100.00 feet was used as a benchmark to initiate the survey. The elevations were determined using standard surveying techniques and were measured to the nearest 0.01 feet.

On March 15, 2001, groundwater samples were collected from the four monitoring wells. Prior to sampling, Pioneer gauged each monitoring well using a sonic interface probe to measure the depth to groundwater and to determine the presence or absence of free product to an accuracy of 0.01 feet. No free product was encountered. The monitoring wells were purged of a minimum of three well volumes of groundwater using dedicated high-density polyethylene (HDPE) disposable bailers so that a true and representative sample of formation water could be collected for analysis. Samples were then collected from the wells using HDPE disposable bailers and placed in containers suitable for the respective analysis and the appropriate preservatives were added to the samples collected for VOCs and metals as required. The samples were stored in a cooler on ice in the field and shipped overnight under standard chain-of-custody procedures to an independent laboratory. A complete groundwater sampling protocol is included in Appendix C. The samples were submitted for analysis of VOCs, acids, base/neutrals, PNAs, and Priority Pollutant total metals. All analytical tests were performed in accordance with accepted US EPA Test Methods. To note, MW-4 was resampled for VOCs on April 2, 2001, as the sample vials were accidentally broken at the laboratory. Further, MW-2 and MW-4 were resampled for total lead on April 12, 2001, to confirm the analytical results, as the initial samples contained a high concentration of suspended solids, which may have contributed to falsely elevated analytical results for this inorganic contaminant.

Monitoring well completion logs are presented in Appendix E. Pioneer's complete protocol for monitoring well installation and groundwater sampling is provided in Appendix C. A photographic log is provided for review in Appendix D.

2.6 Site Geology

The soil borings were advanced through a surface finish of asphalt or concrete and associated crushed limestone base material. The crushed limestone base material was encountered to approximately 3 ft. below surface grade (BSG). Fill material consisting of silty sand, gravel, cinders and bricks was encountered below the base material to approximately 6 ft. BSG. The soil underlying the fill material consisted of fairly uniform silty sand from approximately 6-10 ft. BSG. The sand was fine-grained; exhibited black, gray, and tan color variations; and was relatively dense. The sand was followed by a silty clay layer encountered from approximately 10 ft. BSG to the boring terminus, up to 30 ft. BSG. The silty clay contained varying percentages of fine-grained sand, retained a firm to stiff consistency, and exhibited brown and gray color variations.

According to an Illinois State Geological Survey (ISGS) map dated 1984 and titled *Stack-Unit Mapping of Geological Materials in Illinois to a Depth of 15 Meters*, by Kempton, John P. et al., and the ISGS map dated 1970 and titled *Surficial Geology of the Chicago Region* by Willman and Lineback (Appendix A), the subject site is situated on sediments of the Carmi Member of the Equality Formation. The Carmi Member is described as containing largely quite-water lake sediments with dominantly well-bedded silt with thin beds of clay. In this region, the Equality Formation is discontinuous and generally less than 20 feet thick. The Equality Formation is underlain by the Wedron Formation, which is described as containing silty and clayey soil generally greater than 20 feet thick.

Plate 1 of the ISGS Circular dated 1984 and titled *Potential for Contamination of Shallow Aquifers in Illinois*, by Berg, Richard C. et al. (Appendix A), identifies that the subject site is located in an area designated as "E". An "E" classification is described as containing at least 50 feet of uniform, relatively impermeable silty or clayey glacial till with no evidence of interbedded sand or gravel. An "E" classification indicates that there is a minimal potential for shallow aquifer contamination.

The above descriptions are consistent with observations made of the silty clay layer encountered at the subject site which suggests these sediments are native soils and laterally extensive. A complete listing of the geological conditions encountered during drilling is provided in the soil boring logs in Appendix E.

2.7 Site Hydrogeology

Evidence of groundwater was observed at inconsistent depths during the subsurface investigation. Generally, groundwater was observed within the fill material or sandy soil above the native silty clay layer. The silty clay soils at 5-6 feet BSG did not exhibit significant moisture content. These subsurface conditions are common in this area and create discontinuous, perched zones of groundwater that are not capable of a sustainable yield and does not exhibit any significant flow dynamic.

The shallow groundwater wells were specifically constructed to intercept this perched groundwater and thus, the depth to groundwater was typically between 5-6 feet BSG. The groundwater elevations observed at the site suggest groundwater has a general easterly component of flow. It should be noted that seasonal and yearly fluctuations in the perched groundwater table could significantly influence flow directions in such hydrogeologic settings.

Table 2.2
Groundwater Monitoring Well Data

Groundwater Monitoring Well	Depth to Water* 3/15/01	Groundwater Elevation	Depth to Water* 4/12/01	Groundwater Elevation
MW-1	5.30	94.39	--	--
MW-2	6.32	94.81	6.25	94.88
MW-3	5.06	94.64	--	--
MW-4	3.20	95.30	2.53	95.97

Notes: Referenced to arbitrary site datum of 100.00 feet
* Referenced to top of inner casing that extends approximately3- 3.5 feet above surface grade.
-- Indicates data not collected.

On March 15, 2001, a slug test was performed on MW-2 to gain an understanding of the hydrogeologic characteristics of the subsurface. The slug test involved removing a certain volume of water from the groundwater monitoring well and recording the change in water level with time as the well recharged. The data obtained from this procedure was subsequently used to calculate a site-specific hydraulic conductivity value, which is a measure of the rate at which groundwater flows through the soil.

Pioneer selected the Bouwer-Rice method for slug test data interpretation and employed this analysis using groundwater modeling software (AquiferTest, Version 2.56). The hydraulic conductivity was calculated to be 3.75×10^{-5} cm/sec. The slug test data is included in Appendix F for review.

Based on the site-specific geologic and hydrogeologic conditions, the groundwater at the site can be characterized as Class II groundwater. Therefore, in order to allow for the formal use of the soil and groundwater objectives specifically developed for Class II groundwater, a Class II groundwater demonstration follows. Pursuant to 35 IAC 620.220, groundwater can be classified as Class II if it *does not* meet the criteria for Class I groundwater. Class I groundwater is defined in 35 IAC 620.210 as groundwater located 10 ft. below the land surface *and* within:

- the minimum setback zone of a well which serves as a potable water supply and to the bottom of such well;

There are no potable water supply wells located within the City of Chicago. A groundwater ordinance prohibiting the installation and use of potable water wells was passed by the City of Chicago, on May 14, 1997. In addition, since the ordinance does not expressly prohibit the local government from installing and using potable water supply wells, the City of Chicago also entered into a Memorandum of Understanding (MOU) with the IEPA on July 3, 1997.

- unconsolidated sand, gravel, or sand and gravel which is 5 ft. or more in thickness and that contains 12 percent or less fines;

While sandy fill material was encountered beneath the site, there are no native unconsolidated sand, gravel, or sand and gravel units located at the site to a depth of at least 30 ft. BSG. As mentioned previously in Section 2.6, three separate ISGS references indicate the native soil in this area is comprised of silt and clay to at least 50 feet BSG.

- sandstone which is 10 ft. or more in thickness, or fractured carbonate which is 15 ft. or more in thickness; or

Pioneer did not encounter any sandstone or fractured carbonate to a depth of at least 30 ft. BSG during the site investigation.

- any geological material which is capable of *sustained* groundwater yield of 150 gallons a day or has a hydraulic conductivity of 1 x 10^{-4} cm/sec or greater.

As stated previously, an *in-situ* slug test was performed at the subject site and the hydraulic conductivity was calculated to be 3.75 x 10^{-5} cm/sec. Based on the field determined hydraulic conductivity for the subject property, Pioneer calculated the well yield pursuant to Section 620.210(a)(4)(A). The results of the well yield calculations indicated that, from a 1-foot diameter borehole and 15 foot saturated thickness, the native soil is capable of a *sustained* groundwater yield of 0.006 gallons per day (Appendix G).

Pioneer believes that the combined site-specific geological information and the City of Chicago's groundwater ordinance and MOU support the classification of the groundwater as Class II groundwater, thereby justifying the use of the Class II objectives for both soil and groundwater.

3.0 TIER 1 EVALUATION

3.1 Analytical Results Introduction

For purposes of Pioneer's assessment work and in accordance with standard industry practices, the soil and groundwater sample analytical results contained herein are compared to the most stringent soil remediation objectives (SROs) for residential property and the most stringent groundwater remediation objectives (GROs) for Class II groundwater. These objectives, also referred to as Tier 1 SROs and GROs, are found in 35 Illinois Administrative Code (IAC) Part 742 (Tiered Approach to Corrective Action Objectives—TACO). The Tier 1 SROs and GROs represent contaminant concentrations that are acceptable to the Illinois Environmental Protection Agency (IEPA). The Tier 1 SROs are based on a risk assessment that incorporates a conservative exposure scenario and yields values relative to three primary exposure pathways, namely ingestion, inhalation and the soil component of the groundwater ingestion exposure route (migration to groundwater). The migration to groundwater route is further divided into Class I and Class II groundwater designations. The Tier 1 GROs are also divided into Class I and Class II groundwater designations.

Although these Tier 1 SROs and GROs may not represent final remediation objectives for this site, the analytical results are herein compared to the most stringent objectives for residential property and Class II groundwater, for initial screening purposes.

3.2 Tier 1 Evaluation--Soil

The analytical results of the soil samples analyzed for VOCs, BTEX, acids, base/neutrals, PNAs, and/or various total metals indicated that certain COCs were detected above the IEPA's Tier 1 SROs for various pathways. The following table (Table 3.1) provides a detailed breakdown of the particular pathway-specific SROs that were exceeded for residential property. The primary COCs detected at the site are PNAs, lead and carbazole.

Table 3.1
Contaminants of Concern Exceeding Tier 1 SROs

	TACO Exposure Pathways		
Sample Location/ Depth in feet	*Migration to Class II Groundwater*	*Ingestion (Residential)*	*Inhalation (Residential)*
B-2 (2-4)		Benzo(a)pyrene	
B-5 (6-9)		Benzo(a)pyrene Dibenzo(a,h)anthracene Beryllium	
B-6 (3-6)		Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Dibenzo(a,h)anthracene Ideno(1,2,3-cd)pyrene Lead	
B-9 (6-9)	Cis 1,2-Dichloroethene Trichloroethene Carbazole Benzo(a)anthracene Benzo(b)fluoranthene Dibenzo(a,h)anthracene	Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Ideno(1,2,3-cd)pyrene Lead	
B-10 (6-9)	Tetrachloroethene	Benzo(a)anthracene Benzo(a)pyrene Dibenzo(a,h)anthracene Arsenic Lead	
B-11 (6-9)		Benzo(a)pyrene Dibenzo(a,h)anthracene Lead	
B-12 (6-9)		Lead	
B-13 (3-6)		Benzo(a)pyrene Dibenzo(a,h)anthracene	
B-15 (9-12)		Benzo(a)pyrene	
B-18 (8-10)		Lead	
B-19 (3-6)		Benzo(a)anthracene Benzo(a)pyrene Lead	
B-21 (0-3)		Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Dibenzo(a,h)anthracene Ideno(1,2,3-cd)pyrene Lead	

Table 3.1 (continued)
Contaminants of Concern Exceeding Tier 1 SROs

	TACO Exposure Pathways		
Sample Location/ Depth in feet	*Migration to Class II Groundwater*	*Ingestion (Residential)*	*Inhalation (Residential)*
B-27 (0-3)		Benzo(a)pyrene	
B-27 (6-8)		Benzo(a)pyrene Dibenzo(a,h)anthracene Lead	
B-30 (2-4)		Benzo(a)pyrene Dibenzo(a,h)anthracene	
B-32 (0-3)		Lead	
B-33 (0-3)		Benzo(a)pyrene Dibenzo(a,h)anthracene Lead	
B-34 (0-3)		Benzo(a)pyrene Dibenzo(a,h)anthracene Lead	
B-35 (0-3)	Carbazole	Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Dibenzo(a,h)anthracene Ideno(1,2,3-cd)pyrene Lead	

It should be noted, pH-specific SROs for the migration to groundwater pathways are not provided for certain metals. Additionally, pH-specific SROs are only provided for pH values between 4.5 and 8 standard units (su). The majority of the soil samples exhibited pH values above 8 su. Thus, consistent with IEPA guidelines, the detected concentrations of these metals were also compared to the published State background concentrations as provided in Part 742, Appendix A, Table G. Upon this comparison, the total concentrations of several metals were detected above the State background levels in various soil samples. For further characterization, the soil samples exhibiting the highest total concentrations of these metals were re-analyzed utilizing the SPLP test method. Soil sample analytical results obtained using the SPLP method can be directly compared to the migration to groundwater Tier 1 SROs since these levels were developed specifically for use with this test method. The analytical results of the five soil samples re-analyzed for SPLP metals indicated that only one soil sample (B-19 [3-6]) exhibited concentrations above the Tier 1 SROs for Class II groundwater.

Due to the relatively high concentrations of total lead detected in several soil samples, the two samples exhibiting the highest concentrations of total lead from the initial round of sampling, B-6 (3-6) and B-10 (6-9), were re-analyzed for lead using the TCLP test method. Additionally, the soil sample exhibiting the highest level of total lead from the second sampling event, B-19 (3-6), was also submitted for analysis of lead by the TCLP test method. The TCLP test method is used to determine if the sample concentration exhibits the "characteristic" of toxicity for hazardous waste. The TCLP analytical results of these three samples were compared to the concentrations presented in 35 IAC 721.124(b)—Maximum Concentrations of Contaminants for the Toxicity Characteristic. The analytical results indicated that the levels of TCLP lead in B-6 (3-6) and B-10 (6-9) were below the regulatory limit of 5.0 mg/L (parts per million-ppm), and consequently, would not be considered "characteristically" hazardous. However, the analytical results of soil sample B-19 (3-6) indicated the TCLP lead concentration was 12 mg/l. Thus, additional subsurface investigation was conducted in this lead "hot spot" area in an attempt to delineate the characteristically hazardous soil. The following table summarizes the results of this additional work and Figure 3 depicts the estimated limits of the characteristically hazardous soil.

Table 3.2
Soil Analytical Summary for Lead "Hot Spot"

Sample Location	Total Lead	SPLP Lead	TCLP Lead
B-6 (3-6)	**1,610,000**	--	136
B-18 (0-3)	4,160	--	--
B-18 (8-10)	**442,000**	--	--
B-19 (0-3)	86,300	848	--
B-19 (3-6)	**4,030,000**	--	**12,000**
B-46 (3-6)	**1,770,000**	--	**80,000**
B-47 (0-3)	--	--	89
B-47 (3-6)	**3,240,000**	--	**37,600**
B-47 (6-9)	--	--	<100
B-48 (3-6)	--	--	<100
B-49 (3-6)	--	--	103
B-50 (0-3)	--	--	<100
B-50 (3-6)	--	--	<50
B-50 (6-9)	--	--	<50
B-51 (0-3)	--	--	105
B-51 (3-6)	--	--	**9,870**
B-51 (6-9)	--	--	<100
B-56 (3-6)	--	--	**167,000**
B-56 (6-9)	--	--	<100
B-57 (3-6)	--	--	<100
B 58 (3-6)	--	--	2,240
B-60 (3-6)	--	--	**10,600**
B-60 (6-9)	--	--	<100
B-61 (3-6)	--	--	**15,000**
B-61 (6-9)	--	--	<100
B-62 (3-6)	--	--	278
B-63 (3-6)	--	--	3,430
B-64 (3-6)	--	--	**31,300**
B-65 (3-6)	--	--	3,780
B-66 (3-6)	--	--	653
B-67 (3-6)	--	--	**16,600**
Applicable SRO	**400,000**	**100**	**5,000**

The locations of the soil borings are illustrated on Figure 1 and the analytical results are summarized on Tables 1 through 10. The laboratory analytical reports are included in Appendix H.

3.3 Tier 1 Evaluation--Groundwater

The analytical results of the groundwater samples analyzed for VOCs, acid extractable compounds, base/neutral extractable compounds, PNAs, and Priority Pollutant total metals indicated that the lead detected in the samples form MW-2 and MW-4 was the only COC detected above the IEPA's Tier 1 GROs for Class II groundwater. As mentioned previously, MW-2 and MW-4 were resampled for total lead and extra steps were taken to reduce the amount

of suspended solids in the groundwater samples. The analytical results of this subsequent testing indicated that the level of total lead in the sample from MW-2 was below the Tier 1 GRO for Class II groundwater, however, the concentration in the sample from MW-4 still exceeded the Tier 1 GRO for Class II groundwater.

The locations of the monitoring wells are illustrated on Figure 1 and the analytical results are summarized on Tables 11 through 15. The laboratory analytical reports are included in Appendix H.

4.0 REMEDIATION OBJECTIVES DETERMINATION

The purpose of this remediation objectives determination is to establish the applicable guidelines and objectives at the subject site. While the subject site is currently being used for industrial purposes, much of the surrounding area currently is or is being developed as residential. Thus, so as not to limit the future use of this property, the Tier 1 standards for residential sites will be utilized. However, it is anticipated that pathway exclusion procedures and engineered barriers will be utilized to adequately manage the majority of subsurface impacts in-place. Given the site-specific conditions, the applicable SROs/GROs should be based on the Class II groundwater standards.

5.0 SUMMARY

Pioneer was contracted by The Retirement Program of Farley Inc. to conduct subsurface investigation activities and provide IEPA reporting services for the subject site. The purpose of the subsurface investigation was to fully characterize the RECs previously identified at the subject site by Pioneer while conducting a Phase I ESA. This work is being conducted to facilitate a prospective real estate transaction and ultimately an NFR Letter will be sought for the subject site pursuant to 35 IAC 740.430 and 415 ILCS 5/58.10.

Between December 21, 2000, and June 20, 2001, Pioneer advanced a total of 67 soil borings and installed 4 groundwater monitoring wells in specific areas throughout the site (Figure 1). The sampling plan was based on the RECs outlined in Pioneer's Phase I ESA, the layout of the subject site, and practical/spatial considerations.

The analytical results of the soil samples analyzed for VOCs, BTEX, acids, base/neutrals, PNAs, and/or various metals (total, SPLP, and TCLP) indicated that a variety of these COCs were detected above the IEPA's Tier 1 SROs for certain pathways. Further, levels of TCLP lead were detected at levels considered characteristically hazardous in certain soil samples collected from the east-central portion of the site.

The analytical results of the groundwater samples analyzed for VOCs, acid extractable compounds, base/neutral extractable compounds, PNAs, and Priority Pollutant total metals indicated that lead detected in MW-4 was the only COC above the Tier 1 GROs for Class II groundwater.

Based on the analytical results, the nature and extent of contamination has been adequately defined to the extent practicable given site constraints and practical considerations. The findings of the subsurface investigation indicate the following:

- The site has been impacted from past operations in various areas;
- The primary COCs are PNAs, carbazole and lead;
- The extent of impact is primarily limited to the upper 9 feet;
- There is no evidence of USTs currently located at the site and there is no evidence of contamination exceeding the applicable objectives associated with former USTs;
- There was no evidence of "black sands" buried on-site; and
- A "hot spot" of characteristically hazardous lead impacted soil was identified below the east-central portion of the existing building.

6.0 CONCLUSIONS

Based on the nature and extent of contamination detected at the subject site, Pioneer recommends a Remedial Action Plan (RAP) be completed for the site and submitted to the IEPA for approval. This RAP should include the following elements:

- A full evaluation of the selected technology that will be implemented to remediate the characteristically hazardous lead detected in the soil below the east-central portion of the building.

- A fate and transport evaluation for all COCs exceeding applicable Tier 1 SROs and GROs and a determination as to whether the impacted or potentially impacted media will be remediated or if the groundwater pathway will be eliminated pursuant to 742.320.

- An evaluation of all COCs that exceed the ingestion and inhalation pathway and a determination as to whether an engineered barrier will be used to eliminate the potential for exposure pursuant to 742.310 and 742.315.

7.0 CLOSING REMARKS

This report has been prepared for the sole use of the client identified in the report and can not be relied upon by other persons or entities without the joint permission of the client and Pioneer Environmental, Inc. (Pioneer). The observations and conclusions contained herein are limited by the scope and intent of the work mutually agreed upon by the client and Pioneer and the work actually performed. There are no warranties, implied or expressed, concerning the environmental integrity of areas and/or mediums not analytically tested.

8.0 REFERENCES

American Society for Testing and Materials. 1984. "Standard Method for Penetration Test and Split-Barrel Sampling of Soils". (ASTM D1586). Reprinted from *Annual Book of ASTM Standards,* Vol. 04.08.

American Society for Testing and Materials. 1984. "Standard Guide for Sampling Groundwater Monitoring Wells". (ASTM D4448). Reprinted from *Annual Book of ASTM Standards,* Vol. 04.08.

Berg, Richard C. et al. 1984. *Potential for Contamination of Shallow Aquifers in Illinois*. Illinois State Geological Survey Circular 532.

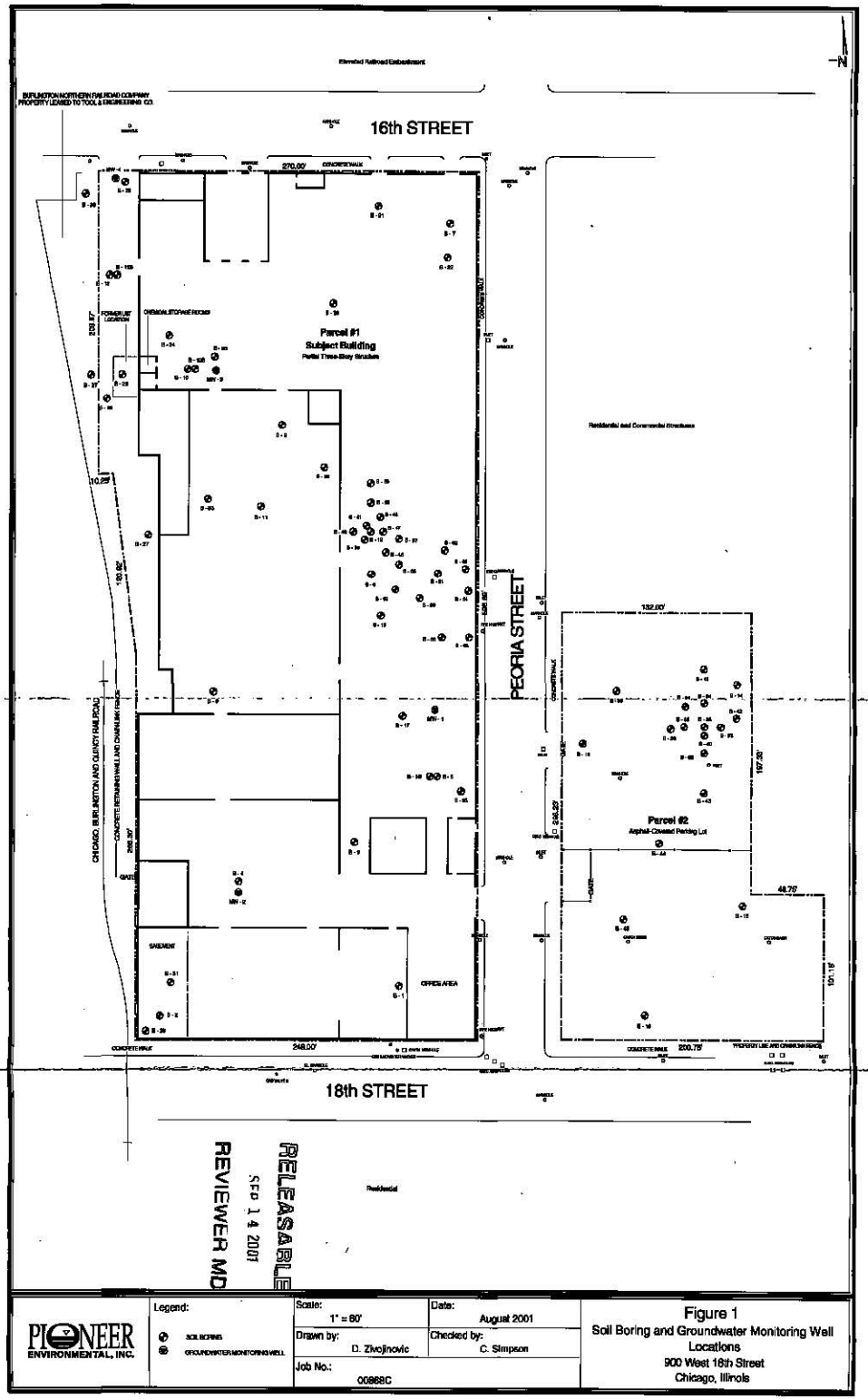
Berg, Richard C. and Kempton, John P. 1988. *Stack-unit Mapping of Geologic Materials in Illinois to a Depth of 15 Meters*. Illinois State Geological Survey Circular 542.

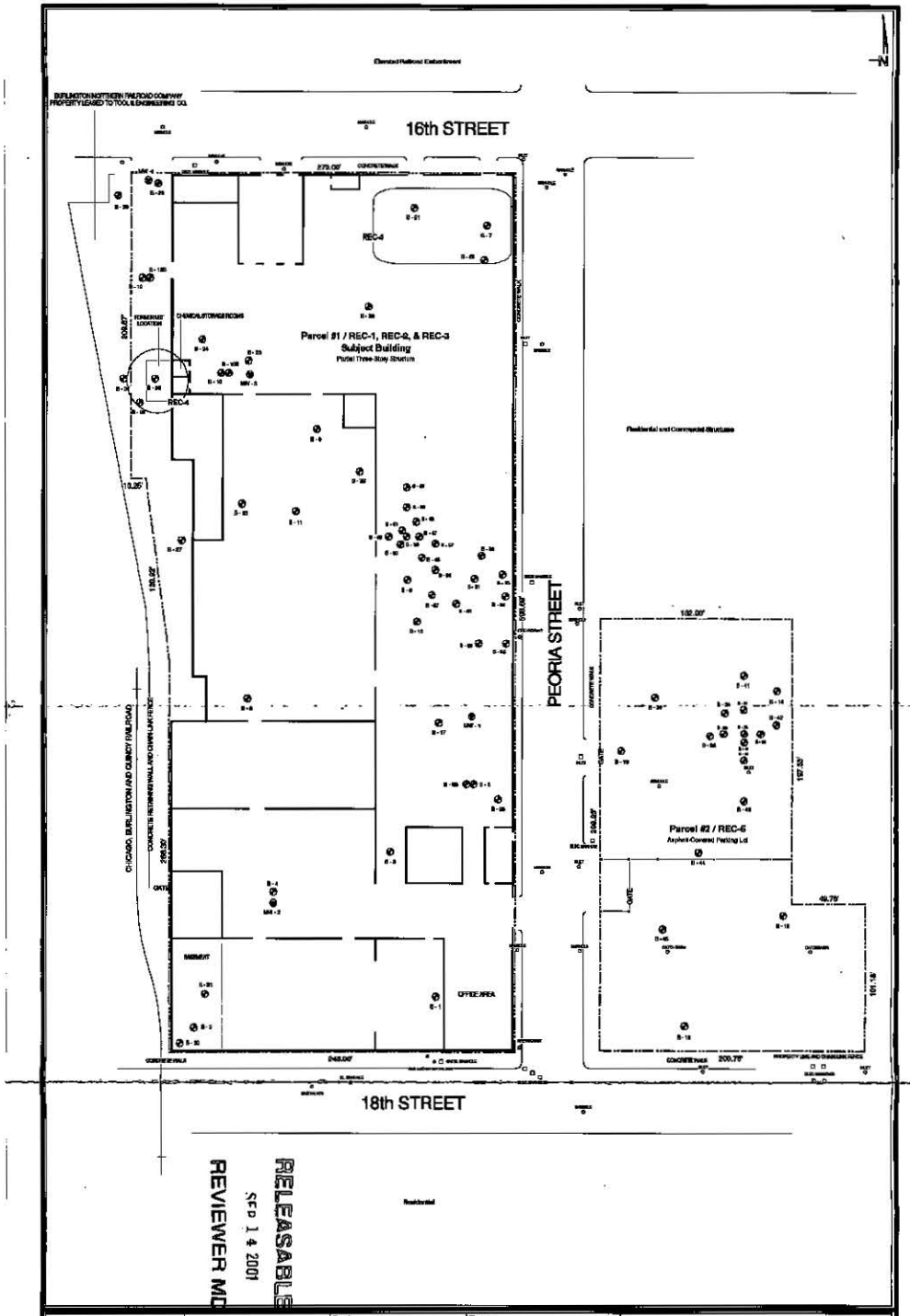
Illinois Pollution Control Board. 1997. *Site Remediation Program.* Title 35 Illinois Administrative Code Part 740. Springfield, IL.

Illinois Pollution Control Board. 1997. *Tiered Approach to Corrective Action Objectives.* Title 35 Illinois Administrative Code Part 742. Springfield, IL.

Willman, H.B. 1971. *Summary of the Geology of the Chicago Area.* Illinois State Geological Survey Circular 460.

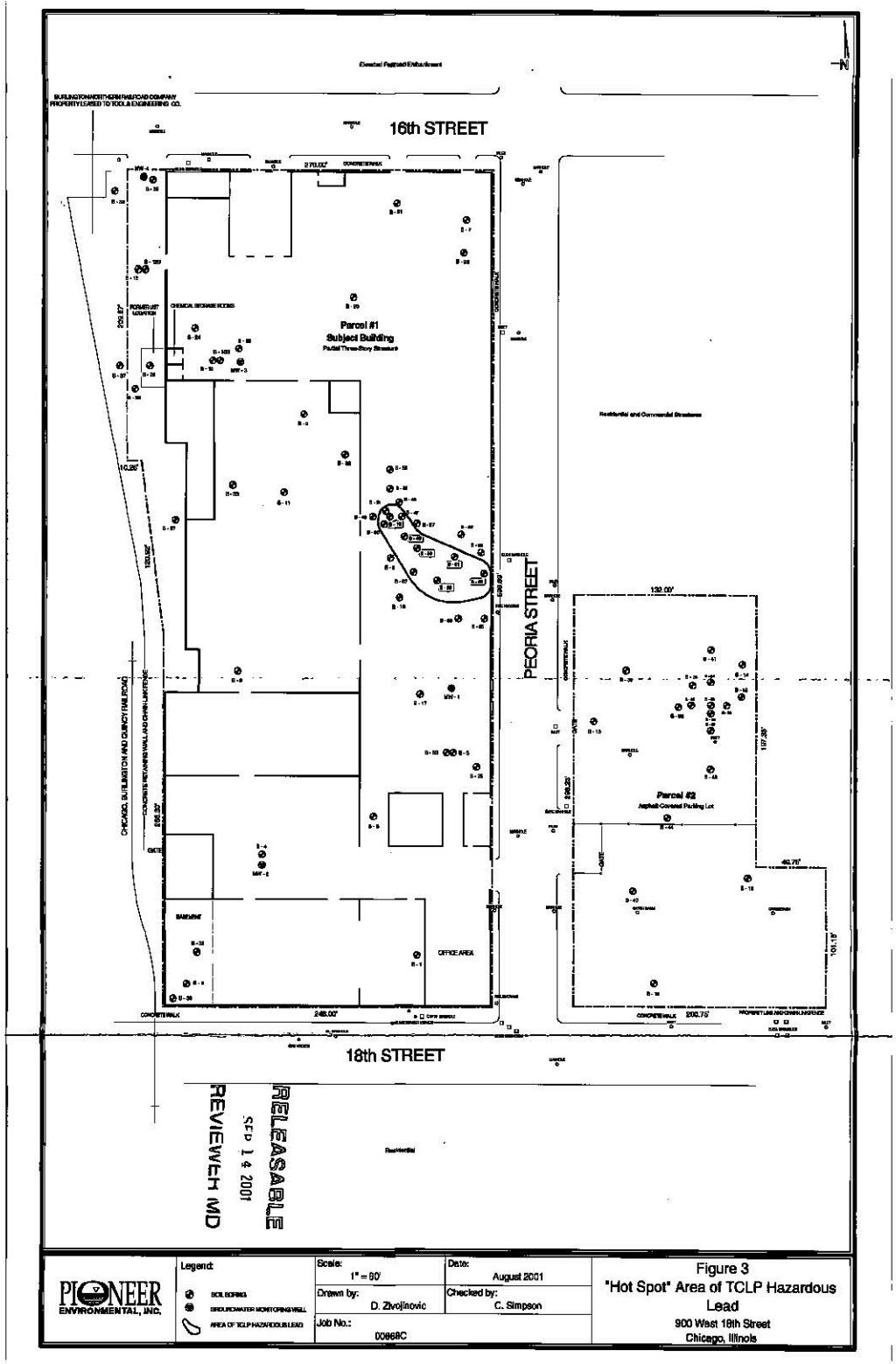
LIST OF FIGURES





PIONEER ENVIRONMENTAL, INC.	Legend: ● SOIL BORING ● GROUNDWATER MONITORING WELL	Scale: 1" = 60'	Date: August 2001
		Drawn by: D. Zivojinovic	Checked by: C. Simpson
		Job No.: 00868C	

Figure 2
REC Areas
900 West 18th Street
Chicago, Illinois



LIST OF TABLES

TABLE NO. 1 (page 1 of 2)
Soil Sample Analytical Results: VOCs
900 W. 18th St. / Chicago, Illinois

																					Tier 1 Soil Remediation Objectives (Tier 1 SROs) Residential Property Use (1)			
																					Route Specific Values		Migration to Groundwater	
ANALYTE	B-1 (0-3)	B-2 (2-4)	B-3 (6-9)	B-4 (9-12)	B-5 (6-9)	B-6 (3-6)	B-7 (6-9)	B-8 (6-9)	B-9 (6-9)	B-10 (6-9)	B-11 (6-9)	B-12 (6-9)	B-17 (0-3)	B-18 (0-3)	B-19 (0-3)	B-19 (3-6)	B-20 (0-3)	B-20 (6-9)	B-21 (0-3)	B-21 (6-9)	Ingestion	Inhalation	Class I	Class II
1,1,1-Trichloroethane	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	150	< 10	47	< 10	<5.3	<6.2	<5	<5.8	<5.1	<5.2	<5.6	<5	–	1,200,000	2,000	9,600
1,1,2,2-Tetrachloroethane	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	<5.3	<6.2	<5	<5.8	<5.1	<5.2	<5.6	<5	–	–	–	–
1,1,2-Trichloroethane	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	<5.3	<6.2	<5	<5.8	<5.1	<5.2	<5.6	<5	310,000	1,800,000	20	300
1,1-Dichloroethane	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	100	< 10	14 "J"	< 10	<5.3	<6.2	<5	<5.8	<5.1	<5.2	<5.6	<5	7,800,000	1,300,000	23,000	110,000
1,1-Dichloroethene	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	<5.3	<6.2	<5	<5.8	<5.1	<5.2	<5.6	<5	700,000	1,500,000	60	300
1,2-Dibromo-3-chloropropane	< 18	< 18	< 18	< 18	< 18	< 18	< 18	< 18	< 18	< 18	< 18	< 18	<5.3	<6.2	<5	<5.8	<5.1	<5.2	<5.6	<5	460	11,000	2	2
1,2-Dibromoethane	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	<5.3	<6.2	<5	<5.8	<5.1	<5.2	<5.6	<5	7.5	170	0.4	4
1,2-Dichloroethane	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	<5.3	<6.2	<5	<5.8	<5.1	<5.2	<5.6	<5	7,000	400	20	100
1,2-Dichloropropane	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	<5.3	<6.2	<5	<5.8	<5.1	<5.2	<5.6	<5	9,000	15,000	30	150
1,3-Dichloropropene (total)	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	<10.6	<12.4	<10	<11.6	<10.2	<10.4	<11.2	<10	4,000	100	4	20
2-Butanone (MEK)	< 250	< 250	< 250	< 250	< 250	< 250	1,600	1,600	< 250	2,300	1,500	2,000	<21	<25	<20	<23	<20	<21	<22	<20	–	–	–	–
2-Hexanone	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	<11	<12	<10	<12	<10	<10	<11	<10	–	–	–	–
4-Methyl-2-Pentanone (MIBK)	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	<11	<12	<10	<12	<10	<10	<11	<10	–	–	–	–
Acetone	< 10	< 10	68	< 10	48	< 10	53	61	190	59	70	180	<110	<120	<100	<120	<100	<100	<110	65"J"	7,800,000	100,000,000	16,000	16,000
Benzene	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	<5.3	<6.2	<5	<5.8	<5.1	<5.2	<5.6	<5	22,000	800	30	170
Bromodichloromethane	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	<5.3	<6.2	<5	<5.8	<5.1	<5.2	<5.6	<5	10,000	3,000,000	600	600
Bromoform	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	<5.3	<6.2	<5	<5.8	<5.1	<5.2	<5.6	<5	81,000	53,000	800	800
Bromomethane	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	<11	<12	<10	<12	<10	<10	<11	<10	110,000	10,000	200	1,200
Butanol	< 980	< 980	< 980	< 980	< 980	< 980	< 980	< 980	< 980	< 980	< 980	< 980	<530	<620	<500	<580	<510	<520	<560	<500	7,800,000	10,000,000	17,000	17,000
Carbon Disulfide	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	<5.3	<6.2	<5	<5.8	<5.1	<5.2	<5.6	<5	7,800,000	720,000	32,000	160,000
Carbon Tetrachloride	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	<5.3	<6.2	<5	<5.8	<5.1	<5.2	<5.6	<5	5,000	300	70	330
Chlorobenzene	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	<5.3	<6.2	<5	<5.8	<5.1	<5.2	<5.6	<5	1,600,000	130,000	1,000	6,500
Chloroethane	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	<11	<12	<10	<12	<10	<10	<11	<10	–	–	–	–
Chloroform	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	<5.3	<6.2	<5	<5.8	<5.1	<5.2	<5.6	<5	100,000	300	600	2,900
Chloromethane	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	<11	<12	<10	<12	<10	<10	<11	<10	–	–	–	–
cis 1,2-Dichloroethene	< 10	< 10	< 10	< 10	< 10	13 "J"	< 10	< 10	**1,300**	20 "J"	67	< 10	<5.3	<6.2	<5	<5.8	<5.1	<5.2	<5.6	8	780,000	1,200,000	400	1,100
Dibromochloromethane	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	<5.3	<6.2	<5	<5.8	<5.1	<5.2	<5.6	<5	1,600,000	1,300,000	400	400
Ethylbenzene	< 10	< 10	< 10	< 10	< 10	15	15	< 10	< 10	300	< 10	< 10	<5.3	<6.2	<5	3"J"	<5.1	<5.2	<5.6	13	7,800,000	400,000	13,000	19,000
Methylene Chloride	< 10	< 10	< 10	< 10	< 10	< 10	**120**	**100**	< 10	**150**	**5,100**	**82**	<5.3	<6.2	<5	<5.8	<5.1	<5.2	<5.6	<5	85,000	13,000	20	200
Styrene	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	<5.3	<6.2	<5	<5.8	<5.1	<5.2	<5.6	<5	16,000,000	1,500,000	4,000	18,000
Tetrachloroethene	< 10	< 10	< 10	< 10	< 10	30	< 10	< 10	**300**	**610**	**88**	< 10	<5.3	<6.2	<5	6	<5.1	<5.2	<5.6	7	12,000	11,000	60	300
Toluene	< 10	< 10	< 10	< 10	< 10	60	40	38	120	290	33	9,300	<5.3	<6.2	<5	9	<5.1	<5.2	<5.6	10	16,000,000	650,000	12,000	29,000
trans 1,2-Dichloroethene	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	610	< 10	< 10	< 10	<5.3	<6.2	<5	<5.8	<5.1	<5.2	<5.6	<5	1,600,000	3,100,000	700	3,400
Trichloroethene	< 10	< 10	< 10	< 10	< 10	60	< 10	< 10	**520**	**1,200**	< 10	< 10	<5.3	<6.2	<5	14	<5.1	<5.2	<5.6	3	58,000	5,000	60	300
Vinyl Acetate	< 53	< 53	< 53	< 53	< 53	< 53	< 53	< 53	< 53	< 53	< 53	< 53	<11	<12	<10	<12	<10	<10	<11	<10	78,000,000	1,000,000	170,000	170,000
Vinyl Chloride	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	<11	<12	<10	<12	<10	<10	<11	<10	300	30	10	70
Xylenes (total)	< 30	< 30	< 30	< 30	< 30	160	< 30	< 30	< 30	1,100	< 30	< 30	<5.3	<6.2	<5	38	2"J"	<5.2	9	77	160,000,000	410,000	150,000	150,000

Notes:
Results listed in ug/kg (parts per billion-ppb)
EPA test method SW846, 8260/5035
"<" indicates not detected at stated detection limits
"–" indicates value not available
"J" indicates analyte detected between limit of detection (LOD) and limit of quantitation (LOQ)
Shaded/Bolded cell indicates concentration detected above most stringent Tier 1 SRO
(1) Pursuant to 35 IAC 742-Tiered Approach to Corrective Action Objectives

TABLE NO. 1 (page 2 of 2)
Soil Sample Analytical Results: VOCs
900 W. 18th St. / Chicago, Illinois

ANALYTE	B-22 (0-3)	B-22 (6-9)	B-23 (0-3)	B-23 (6-9)	B-24 (0-3)	B-24 (6-9)	B-25 (0-3)	B-27 (0-3)	B-27 (6-8)	B-29 (0-3)	B-29 (6-9)	B-29 (14-15)	B-32 (0-3)	B-32 (9-12)	B-33 (0-3)	B-33 (6-9)	B-34 (0-3)	B-35 (0-3)	B-37 (6-9)	B-38 (6-9)	Tier 1 Soil Remediation Objectives (Tier 1 SROs) Residential Property Use [1]		
																					Route Specific Values		Migration to Groundwater
																					Ingestion	Inhalation	Class I	Class II
1,1,1-Trichloroethane	<5.4	<5	<5.4	<5	<5.6	<5	<5.4	<7	<5.2	<8.3	<5	<6.6	<5.2	<5	<5.4	<5	<5.2	<6.8	<6.5	<5.9	--	1,200,000	2,000	9,500
1,1,2,2-Tetrachloroethane	<5.4	<5	<5.4	<5	<5.6	<5	<5.4	<7	<5.2	<8.3	<5	<6.6	<5.2	<5	<5.4	<5	<5.2	<6.8	<6.5	<5.9	--	--	--	--
1,1,2-Trichloroethane	<5.4	<5	<5.4	<5	<5.6	<5	<5.4	<7	<5.2	<8.3	<5	<6.6	<5.2	<5	<5.4	<5	<5.2	<6.8	<6.5	<5.9	310,000	1,800,000	20	300
1,1-Dichloroethane	<5.4	<5	<5.4	<5	<5.6	<5	<5.4	<7	<5.2	<8.3	<5	<6.6	<5.2	<5	<5.4	<5	<5.2	<6.8	<6.5	<5.9	7,800,000	1,300,000	23,000	110,000
1,1-Dichloroethene	<5.4	<5	<5.4	<5	<5.6	<5	<5.4	<7	<5.2	<8.3	<5	<6.6	<5.2	<5	<5.4	<5	<5.2	<6.8	<6.5	<5.9	780,000	1,580,000	60	300
1,2-Dibromo-3-chloropropane	<5.4	<5	<5.4	<5	<5.6	<5	<5.4	<7	<5.2	<8.3	<5	<6.6	<5.2	<5	<5.4	<5	<5.2	<6.8	<6.5	<5.9	460	11,000	2	2
1,2-Dibromoethane	<5.4	<5	<5.4	<5	<5.6	<5	<5.4	<7	<5.2	<8.3	<5	<6.6	<5.2	<5	<5.4	<5	<5.2	<6.8	<6.5	<5.9	7.5	170	0.4	4
1,2-Dichloroethane	<5.4	<5	<5.4	<5	<5.6	<5	<5.4	<7	<5.2	<8.3	<5	<6.6	<5.2	<5	<5.4	<5	<5.2	<6.8	<6.5	<5.9	7,000	400	20	100
1,2-Dichloropropane	<5.4	<5	<5.4	<5	<5.6	<5	<5.4	<7	<5.2	<8.3	<5	<6.6	<5.2	<5	<5.4	<5	<5.2	<6.8	<6.5	<5.9	9,000	15,000	30	150
1,3-Dichloropropene (total)	<10.8	<10	<10.8	<10	<11.2	<10	<10.8	<14	<10.4	<16.6	<10	<13.2	<10.4	<10	<10.8	<10	<10.4	<13.6	<13	<11.8	4,000	100	4	20
2-Butanone (MEK)	<21	<20	<22	<20	<23	<20	<21	<28	<21	<33	<20	<26	<21	<20	<21	<20	<21	<27	<26	<24	--	--	--	--
2-Hexanone	<11	<10	<11	<10	<11	<10	<11	<14	6"J"	<17	<10	<13	<10	<10	<11	<10	<10	<14	<13	<12	--	--	--	--
4-Methyl-2-Pentanone (MIBK)	<11	<10	<11	<10	<11	<10	<11	<14	<10	<17	<10	<13	<10	<10	<11	<10	<10	<14	<13	<12	--	--	--	--
Acetone	<110	<100	<110	<100	<110	<100	<110	<140	110	<170	<100	<130	<100	<100	<110	<100	<100	<140	17"J"	19"J"	7,800,000	100,000,000	16,000	16,000
Benzene	<5.4	<5	<5.4	<5	<5.6	<5	<5.4	<7	<5.2	<8.3	<5	<6.6	<5.2	<5	<5.4	<5	<5.2	<6.8	<6.5	<5.9	22,000	800	30	170
Bromodichloromethane	<5.4	<5	<5.4	<5	<5.6	<5	<5.4	<7	<5.2	<8.3	<5	<6.6	<5.2	<5	<5.4	<5	<5.2	<6.8	<6.5	<5.9	10,000	3,000,000	600	600
Bromoform	<5.4	<5	<5.4	<5	<5.6	<5	<5.4	<7	<5.2	<8.3	<5	<6.6	<5.2	<5	<5.4	<5	<5.2	<6.8	<6.5	<5.9	81,000	53,000	800	800
Bromomethane	<11	<10	<11	<10	<11	<10	<11	<14	<10	<17	<10	<13	<10	<10	<11	<10	<10	<14	<13	<12	110,000	10,000	200	1,200
Butanol	<540	<500	<540	<500	<560	<500	<540	<700	<520	<830	<500	<660	<520	<500	<540	<500	<520	<680	<650	<590	7,800,000	10,000,000	17,000	17,000
Carbon Disulfide	<5.4	<5	<5.4	<5	<5.6	<5	<5.4	<7	13	<8.3	<5	<6.6	<5.2	<5	<5.4	<5	<5.2	<6.8	<6.5	<5.9	7,800,000	720,000	32,000	160,000
Carbon Tetrachloride	<5.4	<5	<5.4	<5	<5.6	<5	<5.4	<7	<5.2	<8.3	<5	<6.6	<5.2	<5	<5.4	<5	<5.2	<6.8	<6.5	<5.9	5,000	300	70	330
Chlorobenzene	<5.4	<5	<5.4	<5	<5.6	<5	<5.4	<7	<5.2	<8.3	<5	<6.6	<5.2	<5	<5.4	<5	<5.2	<6.8	<6.5	<5.9	1,600,000	130,000	1,000	6,500
Chloroethane	<11	<10	<11	<10	<11	<10	<11	<14	<10	<17	<10	<13	<10	<10	<11	<10	<10	<14	<13	<12	--	--	--	--
Chloroform	<5.4	<5	<5.4	<5	<5.6	<5	<5.4	<7	<5.2	<8.3	<5	<6.6	<5.2	<5	<5.4	<5	<5.2	<6.8	<6.5	<5.9	100,000	300	600	2,900
Chloromethane	<11	<10	<11	<10	<11	<10	<11	<14	<10	<17	<10	<13	<10	<10	<11	<10	<10	<14	<13	<12	--	--	--	--
cis 1,2-Dichloroethene	<5.4	<5	<5.4	<5	<5.6	<5	<5.4	<7	<5.2	<8.3	<5	<6.6	<5.2	13	<5.4	<5	<5.2	<6.8	<6.5	<5.9	780,000	1,200,000	400	1,100
Dibromochloromethane	<5.4	<5	<5.4	<5	<5.6	<5	<5.4	<7	<5.2	<8.3	<5	<6.6	<5.2	<5	<5.4	<5	<5.2	<6.8	<6.5	<5.9	1,600,000	1,300,000	400	400
Ethylbenzene	<5.4	<5	<5.4	<5	<5.6	6	<5.4	<7	11	<8.3	5	<6.6	<5.2	<5	<5.4	<5	<5.2	<6.8	<6.5	<5.9	7,800,000	400,000	13,000	19,000
Methylene Chloride	<5.4	<5	<5.4	<5	<5.6	<5	<5.4	<7	<5.2	<8.3	<5	<6.6	3"J"	2"J"	<5.4	3"J"	2"J"	<6.8	<6.5	3"J"	85,000	13,000	20	200
Styrene	<5.4	<5	<5.4	<5	<5.6	<5	<5.4	<7	<5.2	<8.3	<5	<6.6	<5.2	<5	<5.4	<5	<5.2	<6.8	<6.5	2.4	16,000,000	1,500,000	4,000	18,000
Tetrachloroethene	<5.4	<5	<5.4	<5	<5.6	<5	<5.4	<7	<5.2	<8.3	<5	<6.6	<5.2	<5	<5.4	<5	<5.2	<6.8	<6.5	<5.9	12,000	11,000	60	300
Toluene	<5.4	<5	<5.4	<5	<5.6	2"J"	<5.4	<7	6	<8.3	<5	<6.6	<5.2	<5	<5.4	<5	5"J"	<6.8	3"J"	<5.9	16,000,000	650,000	12,000	29,000
trans 1,2-Dichloroethene	<5.4	<5	<5.4	<5	<5.6	<5	<5.4	<7	<5.2	<8.3	<5	<6.6	<5.2	2"J"	<5.4	<5	<5.2	<6.8	<6.5	57	1,600,000	3,100,000	700	3,400
Trichloroethene	<5.4	<5	<5.4	<5	<5.6	<5	<5.4	<7	<5.2	<8.3	<5	<6.6	<5.2	5"J"	<5.4	<5	<5.2	<6.8	<6.5	<5.9	58,000	5,000	60	300
Vinyl Acetate	<11	<10	<11	<10	<11	<10	<11	<14	<10	<17	<10	<13	<10	<10	<11	<10	<10	<14	<13	<5.9	78,000,000	1,000,000	170,000	170,000
Vinyl Chloride	<11	<10	<11	<10	<11	<10	<11	<14	<10	<17	<10	<13	<10	<10	<11	<10	<10	<14	<13	<12	300	30	10	70
Xylenes (total)	<5.4	<5	<5.4	<5	<5.6	2J	<5.4	3"J"	97	<8.3	9	<6.6	<5.2	<5	<5.4	<5	<5.2	<6.8	<6.5	<12	160,000,000	410,000	150,000	150,000

Notes:
Results listed in ug/kg (parts per billion-ppb)
EPA test method SW846, 8260/5035
"<" indicates not detected at stated detection limits
"--" indicates value not available
"J" indicates analyte detected between limit of detection (LOD) and limit of quantitation (LOQ)
Shaded/Bolded cell indicates concentration detected above most stringent Tier 1 SRO
(1) Pursuant to 35 IAC 742-Tiered Approach to Corrective Action Objectives

TABLE NO. 2 (page 1 of 2)
Soil Sample Analytical Results: Acid Extractable Compounds
900 W. 18th St. / Chicago, Illinois

																Tier 1 Soil Remediation Objectives (Tier 1 SROs) Residential Property Use. (1)			
																Route Specific Values		Migration to Groundwater	
ANALYTE	B-2 (2-4)	B-4 (9-12)	B-5 (6-9)	B-6 (3-6)	B-7 (6-9)	B-9 (6-9)	B-10 (6-9)	B-11 (6-9)	B-12 (6-9)	B-17 (0-3)	B-18 (0-3)	B-19 (0-3)	B-20 (0-3)	B-21 (0-3)	B-22 (0-3)	B-23 (0-3)	Ingestion	Inhalation	Class I	Class II
2,4,5-Trichlorophenol	< 100	< 100	< 100	< 100	< 2,500	< 500	< 500	< 100	< 100	<800	<800	<800	<800	<800	<800	<800	78,000,000	–	270,000	1,400,000
2,4,6-Trichlorophenol	< 35	< 35	< 35	< 35	< 875	< 175	< 175	< 35	< 35	<330	<330	<330	<330	<330	<330	<330	58,000	200,000	200	770
2,4-Dichlorophenol	< 40	< 40	< 40	< 40	< 1,000	< 200	< 200	< 40	< 40	<330	<330	<330	<330	<330	<330	<330	230,000	–	1,000	1,000
2,4-Dimethylphenol	< 160	< 160	< 160	< 160	< 4,000	< 800	< 800	< 160	< 160	<330	<330	<330	<330	<330	<330	<330	1,600,000	–	9,000	9,000
2,4-Dinitrophenol	< 49	< 49	< 49	< 49	< 2,450	< 245	< 245	< 49	< 49	<800	<800	<800	<800	<800	<800	<800	160,000	–	200	200
2-Chlorophenol	< 33	< 33	< 33	< 33	< 825	< 165	< 165	< 33	< 33	<330	<330	<330	<330	<330	<330	<330	390,000	53,000,000	4,000	4,000
2-Methyl-4,6-dinitrophenol	< 37	< 37	< 37	< 37	< 925	< 185	< 185	< 37	< 37	<330	<330	<330	<330	<330	<330	<330	3,900,000		15,000	15,000
2-Methylphenol (o-Cresol)	< 57	< 57	< 57	< 57	< 1,425	< 285	< 285	< 57	< 57	<330	<330	<330	<330	<330	<330	<330	–	–	–	–
2-Nitrophenol	< 48	< 48	< 48	< 48	< 1,200	< 240	< 240	< 48	< 48	<330	<330	<330	<330	<330	<330	<330	–	–	–	–
4-Chloro-3-methylphenol	< 35	< 35	< 35	< 35	< 875	< 175	< 175	< 35	< 35	<800	<800	<800	<800	<800	<800	<800	–	–	–	–
M & P-Cresol	< 63	< 63	< 63	< 63	< 1,575	350 "J"	< 315	< 63	< 63	<330	<330	<330	<330	<330	<330	<330	–	–	–	–
4-Nitrophenol	< 34	< 34	< 34	< 34	< 850	< 170	< 170	< 34	< 34	<800	<800	<800	<800	<800	<800	<800	–	–	–	–
Benzoic Acid	< 130	< 130	< 130	< 130	< 3,250	< 650	< 650	< 130	< 130	<1,600	<1,600	<1,600	<1,600	<1,600	<1,600	<1,600	310,000,000	–	400,000	400,000
Pentachlorophenol	128	< 34	50 "J"	< 34	< 850	< 170	< 170	< 34	< 34	<800	<800	<800	<800	<800	<800	<800	3,000	–	30	140
Phenol	48 "J"	< 41	< 41	< 41	< 1,025	< 205	< 205	< 41	< 41	<330	<330	<330	<330	<330	<330	<330	47,000,000	–	100,000	100,000

Notes:
Results listed in ug/kg (parts per billion)
EPA test method SW846, 8270
"<" indicates not detected at stated detection limits
"–" indicates value not available
"J" indicates analyte detected between limit of detection (LOD) and limit of quantitation (LOQ)
Shaded/Bolded cell indicates concentration detected above most stringent Tier 1 SRO
(1) Pursuant to 35 IAC 742-Tiered Approach to Corrective Action Objectives

TABLE NO. 2 (page 2 of 2)
Soil Sample Analytical Results: Acid Extractable Compounds
900 W. 18th St. / Chicago, Illinois

												Tier 1 Soil Remediation Objectives (Tier 1 SROs)			
												Residential Property Use (1)			
												Route Specific Values		Migration to Groundwater	
ANALYTE	B-24 (0-3)	B-25 (0-3)	B-25 (6-9)	B-27 (0-3)	B-29 (0-3)	B-30 (2-4)	B-31 (4-6)	B-32 (0-3)	B-33 (0-3)	B-34 (0-3)	B-35 (0-3)	Ingestion	Inhalation	Class I	Class II
2,4,5-Trichlorophenol	<800	<800	<800	<800	<800	<800	<800	<800	<800	<800	<16,000	78,000,000	--	270,000	1,400,000
2,4,6-Trichlorophenol	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<6,600	58,000	200,000	200	770
2,4-Dichlorophenol	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<6,600	230,000	--	1,000	1,000
2,4-Dimethylphenol	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<6,600	1,600,000	--	9,000	9,000
2,4-Dinitrophenol	<800	<800	<800	<800	<800	<800	<800	<800	<800	<800	<16,000	150,000	--	200	200
2-Chlorophenol	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<6,600	390,000	53,000,000	4,000	4,000
2-Methylphenol (o-Cresol)	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<6,600	3,900,000		15,000	15,000
2-Nitrophenol	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<6,600	--	--	--	--
M & P-Cresol	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<6,600	--	--	--	--
2-Methyl-4,6-dinitrophenol	<800	<800	<800	<800	<800	<800	<800	<800	<800	<800	<16,000	--	--	--	--
4-Chloro-3-methylphenol	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<6,600	--	--	--	--
4-Nitrophenol	<800	<800	<800	<800	<800	<800	<800	<800	<800	<800	<16,000	--	--	--	--
Benzoic Acid	<1,600	<1,600	<1,600	<1,600	<1,600	<1,600	<1,600	<1,600	<1,600	<1,600	<32,000	310,000,000	--	400,000	400,000
Pentachlorophenol	<800	<800	<800	<800	<800	<800	<800	<800	<800	<800	<16,000	3,000	--	30	140
Phenol	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<6,600	47,000,000	--	100,000	100,000

Notes:
Results listed in ug/kg (parts per billion)
EPA test method SW846, 8270
"<" indicates not detected at stated detection limits
"--" indicates value not available
"J" indicates analyte detected between limit of detection (LOD) and limit of quantitation (LOQ)
Shaded/Bolded cell indicates concentration detected above most stringent Tier 1 SRO
(1) Pursuant to 35 IAC 742-Tiered Approach to Corrective Action Objectives

TABLE NO. 3 (page 1 of 2)
Soil Sample Analytical Results: Base/Neutral Extractable Compounds
900 W. 18th St. / Chicago, Illinois

ANALYTE	B-3 (2-4)	B-4 (9-12)	B-5 (6-8)	B-6 (3-6)	B-7 (4-6)	B-9 (4-8)	B-10 (6-8)	B-11 (6-8)	B-12 (4-9)	B-17 (0-3)	B-18 (0-3)	B-19 (0-3)	B-20 (0-3)	B-21 (0-3)	B-22 (0-3)	B-23 (0-3)	B-24 (0-3)	Tier 1 Soil Remediation Objectives (Tier 1 SROs) Residential Property Use [1]			
																		Route Specific Values		Migration to Groundwater	
																		Ingestion	Inhalation	Class I	Class II
1,2,4-Trichlorobenzene	< 35	< 35	< 35	< 35	< 875	< 175	< 175	< 35	< 35	<330	<330	<330	<330	<330	<330	<330	<330	780,000	3,200,000	5,000	53,000
1,2-Dichlorobenzene	< 34	< 34	< 34	< 34	< 850	< 170	< 170	< 34	< 34	<330	<330	<330	<330	<330	<330	<330	<330	7,000,000	560,000	17,000	43,000
1,3-Dichlorobenzene	< 33	< 33	< 33	< 33	< 825	< 165	< 165	< 33	< 33	<330	<330	<330	<330	<330	<330	<330	<330	--	--	--	--
1,4-Dichlorobenzene	< 38	< 38	< 38	< 38	< 950	< 190	< 190	< 38	< 38	<330	<330	<330	<330	<330	<330	<330	<330	--	--	2,000	11,000
2,4-Dinitrotoluene	< 45	< 45	< 45	< 45	< 1,125	< 225	< 225	< 45	< 45	<330	<330	<330	<330	<330	<330	<330	<330	900	--	0.8	0.8
2,6-Dinitrotoluene	< 45	< 45	< 45	< 45	< 1,125	< 225	< 225	< 45	< 45	<330	<330	<330	<330	<330	<330	<330	<330	900	--	0.7	0.7
2-Chloronaphthalene	< 41	< 41	< 41	< 41	< 1,025	< 205	< 205	< 41	< 41	<330	<330	<330	<330	<330	<330	<330	<330	--	--	--	--
2-Methylnaphthalene	< 53	< 53	320	110 "J"	< 1,325	5,300	4,000	< 53	< 53	<330	<330	<330	<330	<330	<330	<330	<330	--	--	--	--
2-Nitroaniline	< 60	< 60	< 60	< 60	< 1,500	< 300	< 300	< 60	< 60	<800	<800	<800	<800	<800	<800	<800	<800	--	--	--	--
3,3'-Dichlorobenzidine	< 260	< 260	< 260	< 260	< 13,000	< 1300	< 1300	< 260	< 260	<330	<330	<330	<330	<330	<330	<330	<330	1,000	--	7	33
3-Nitroaniline	< 59	< 59	< 59	< 59	< 1,475	< 295	< 295	< 59	< 59	<800	<800	<800	<800	<800	<800	<800	<800	--	--	--	--
4-Bromophenylphenylether	< 47	< 47	< 47	< 47	< 1,175	< 235	< 235	< 47	< 47	<330	<330	<330	<330	<330	<330	<330	<330	--	--	--	--
4-Chloroaniline	< 180	< 180	< 180	< 180	< 4,500	< 900	< 900	< 180	< 180	<330	<330	<330	<330	<330	<330	<330	<330	310,000	--	700	700
4-Chlorophenylphenylether	< 49	< 49	< 49	< 49	< 1,225	< 245	< 245	< 49	< 49	<330	<330	<330	<330	<330	<330	<330	<330	--	--	--	--
4-Nitroaniline	< 85	< 85	< 85	< 85	< 2,125	< 425	< 425	< 85	< 85	<800	<800	<800	<800	<800	<800	<800	<800	--	--	--	--
Bis(2-chloroethoxy)methane	< 43	< 43	< 43	< 43	< 1,075	< 215	< 215	< 43	< 43	<330	<330	<330	<330	<330	<330	<330	<330	--	--	--	--
Bis(2-chloroethyl)ether	< 36	< 36	< 36	< 36	< 900	< 180	< 180	< 36	< 36	<330	<330	<330	<330	<330	<330	<330	<330	600	200	0.4	0.4
Bis(2-ethylhexyl)phthalate	< 82	< 82	470	83 "J"	< 2,050	< 410	< 410	< 82	82 "J"	<330	<330	53"J"	<330	<330	<330	<330	<330	46,000	31,000,000	3,600,000	31,000,000
Butylbenzylphthalate	< 46	< 46	440	< 46	< 1,150	< 230	< 230	< 46	< 46	<330	<330	<330	<330	<330	<330	<330	<330	16,000,000	930,000	930,000	930,000
Carbazole	< 51	< 51	< 51	< 51	< 1,275	< 255	310 "J"	< 51	< 51	<330	<330	<330	<330	140"J"	<330	<330	<330	32,000	--	600	2,800
Di-n-butyl phthalate	< 130	< 130	190 "J"	< 130	< 3,250	< 650	< 650	< 130	< 130	<330	<330	<330	<330	<330	<330	<330	<330	7,800,000	2,300,000	2,300,000	2,300,000
Di-n-octyl phthalate	< 51	< 51	< 51	100 "J"	< 1,275	< 255	< 255	< 51	< 51	<330	<330	<330	<330	<330	<330	<330	<330	1,600,000	10,000,000	10,000,000	10,000,000
Dibenzofuran	< 40	< 40	72 "J"	85 "J"	< 1,000	11,000	400 "J"	< 40	< 40	<330	<330	<330	<330	140"J"	<330	<330	<330	--	--	--	--
Diethyl phthalate	< 42	< 42	< 42	< 42	< 1,050	< 210	< 210	< 42	< 42	<330	<330	<330	<330	<330	<330	<330	<330	63,000,000	2,000,000	470,000	470,000
Dimethyl phthalate	< 45	< 45	< 45	< 45	< 1,125	< 225	< 225	< 45	< 45	<330	<330	<330	<330	<330	<330	<330	<330	--	--	--	--
Hexachlorobenzene	< 43	< 43	< 43	< 43	< 1,075	< 215	< 215	< 43	< 43	<330	<330	<330	<330	<330	<330	<330	<330	400	1,000	2,000	11,000
Hexachlorobutadiene	< 33	< 33	< 33	< 33	< 825	< 165	< 165	< 33	< 33	<330	<330	<330	<330	<330	<330	<330	<330	--	--	--	--
Hexachlorocyclopentadiene	< 87	< 87	< 87	< 87	< 2,175	< 435	< 435	< 87	< 87	<330	<330	<330	<330	<330	<330	<330	<330	550,000	10,000	400,000	2,200,000
Hexachloroethane	< 32	< 32	< 32	< 32	< 800	< 160	< 160	< 32	< 32	<330	<330	<330	<330	<330	<330	<330	<330	78,000	--	500	2,600
Isophorone	< 34	< 34	< 34	< 34	< 850	< 170	< 170	< 34	< 34	<330	<330	<330	<330	<330	<330	<330	<330	5,600,000	4,600,000	8,000	8,000
N-Nitroso-di-n-propylamine	< 42	< 42	< 42	< 42	< 1,050	< 210	< 210	< 42	< 42	<330	<330	<330	<330	<330	<330	<330	<330	90	--	0.05	0.05
N-Nitrosodiphenylamine	< 43	< 43	< 43	< 43	< 1,075	< 215	< 215	< 43	< 43	<330	<330	<330	<330	<330	<330	<330	<330	130,000	--	1,000	5,600
Nitrobenzene	< 46	< 46	< 46	< 46	< 1,150	< 230	< 230	< 46	< 46	<330	<330	<330	<330	<330	<330	<330	<330	39,000	92,000	100	100

Notes:
Results listed in ug/kg (parts per billion)
EPA test method SW846, 8270
"<" indicates not detected at stated detection limits
"--" indicates value not available
"J" indicates analyte detected between limit of detection (LOD) and limit of quantitation (LOQ)
Shaded/Bolded cell indicates concentration detected above most stringent Tier 1 SRO
(1) Pursuant to 35 IAC 742-Tiered Approach to Corrective Action Objectives

TABLE NO. 3 (page 2 of 2)
Soil Sample Analytical Results: Base/Neutral Extractable Compounds
900 W. 18th St. / Chicago, Illinois

ANALYTE	B-25 (0-3)	B-27 (0-3)	B-29 (0-3)	B-32 (0-3)	B-32 (9-12)	B-33 (0-3)	B-33 (6-9)	B-34 (0-3)	B-35 (0-3)	B-39 (3-6)	B-40 (3-6)	B-40 (6-9)	B-41 (3-6)	B-41 (6-9)	B-42 (3-6)	B-42 (6-9)	B-43 (0-3)	B-43 (3-6)	B-44 (6-9)	B-45 (6-9)	Tier 1 Soil Remediation Objectives (Tier 1 SROs) Residential Property Use (1): Route Specific Values		Migration to Groundwater	
																					Ingestion	Inhalation	Class I	Class II
1,2,4-Trichlorobenzene	<330	<330	<330	<330	<330	<330	<330	<330	<6,600	<330	<330	<330	<330	<330	<330	<330	<330	<3,300	<330	<330	780,000	3,200,000	5,000	53,000
1,2-Dichlorobenzene	<330	<330	<330	<330	<330	<330	<330	<330	<6,600	<330	<330	<330	<330	<330	<330	<330	<330	<3,300	<330	<330	7,000,000	560,000	17,000	43,000
1,3-Dichlorobenzene	<330	<330	<330	<330	<330	<330	<330	<330	<6,600	<330	<330	<330	<330	<330	<330	<330	<330	<3,300	<330	<330	--	--	--	--
1,4-Dichlorobenzene	<330	<330	<330	<330	<330	<330	<330	<330	<6,600	<330	<330	<330	<330	<330	<330	<330	<330	<3,300	<330	<330	--	--	2,000	11,000
2,4-Dinitrotoluene	<330	<330	<330	<330	<330	<330	<330	<330	<6,600	<330	<330	<330	<330	<330	<330	<330	<330	<3,300	<330	<330	900	--	0.8	0.8
2,6-Dinitrotoluene	<330	<330	<330	<330	<330	<330	<330	<330	<6,600	<330	<330	<330	<330	<330	<330	<330	<330	<3,300	<330	<330	900	--	0.7	0.7
2-Chloronaphthalene	<330	<330	<330	<330	<330	<330	<330	<330	<6,600	<330	<330	<330	<330	<330	<330	<330	<330	<3,300	<330	<330	--	--	--	--
2-Methylnaphthalene	350	<330	<330	<330	<330	<330	<330	230"J"	7,900	<330	<330	<330	<330	<330	<330	<330	<330	<3,300	<330	<330	--	--	--	--
2-Nitroaniline	<800	<800	<800	<800	<800	<800	<800	<800	<16,000	<800	<800	<800	<800	<800	<800	<800	<800	<8,000	<800	<800	--	--	--	--
3,3'-Dichlorobenzidine	<330	<330	<330	<330	<330	<330	<330	<330	<6,600	<330	<330	<330	<330	<330	<330	<330	<330	<3,300	<330	<330	1,000	--	7	33
3-Nitroaniline	<800	<800	<800	<800	<800	<800	<800	<800	<16,000	<800	<800	<800	<800	<800	<800	<800	<800	<8,000	<800	<800	--	--	--	--
4-Bromophenylphenylether	<330	<330	<330	<330	<330	<330	<330	<330	<6,600	<330	<330	<330	<330	<330	<330	<330	<330	<3,300	<330	<330	--	--	--	--
4-Chloroaniline	<330	<330	<330	<330	<330	<330	<330	<330	<6,600	<330	<330	<330	<330	<330	<330	<330	<330	<3,300	<330	<330	310,000	--	700	700
4-Chlorophenylphenylether	<330	<330	<330	<330	<330	<330	<330	<330	<6,600	<330	<330	<330	<330	<330	<330	<330	<330	<3,300	<330	<330	--	--	--	--
4-Nitroaniline	<800	<800	<800	<800	<800	<800	<800	<800	<16,000	<800	<800	<800	<800	<800	<800	<800	<800	<8,000	<800	<800	--	--	--	--
Bis(2-chloroethoxy)methane	<330	<330	<330	<330	<330	<330	<330	<330	<6,600	<330	<330	<330	<330	<330	<330	<330	<330	<3,300	<330	<330	--	--	--	--
Bis(2-chloroethyl)ether	<330	<330	<330	<330	<330	<330	<330	<330	<6,600	<330	<330	<330	<330	<330	<330	<330	<330	<3,300	<330	<330	600	200	0.4	0.4
Bis(2-ethylhexyl)phthalate	<330	48"J"	<330	<330	42"J"	<330	<330	65"J"	<6,600	<330	<330	<330	<330	<330	<330	<330	<330	<3,300	<330	<330	46,000	31,000,000	3,600,000	31,000,000
Butylbenzylphthalate	<330	<330	<330	<330	<330	<330	<330	<330	<6,600	<330	<330	<330	<330	<330	<330	<330	<330	<3,300	<330	<330	16,000,000	930,000	930,000	930,000
Carbazole	<330	<330	<330	<330	<330	56"J"	<330	1,000	12,000	<330	<330	<330	<330	<330	49"J"	<330	<330	310"J"	<330	<330	32,000	--	600	2,800
Di-n-butyl phthalate	<330	<330	<330	<330	<330	65"J"	<330	<330	<6,600	<330	<330	<330	<330	<330	<330	<330	<330	<3,300	<330	<330	7,800,000	2,300,000	2,300,000	2,300,000
Di-n-octyl phthalate	<330	<330	<330	<330	<330	<330	<330	<330	<6,600	<330	<330	<330	<330	<330	<330	<330	<330	<3,300	<330	<330	1,600,000	10,000,000	10,000,000	10,000,000
Dibenzofuran	<330	<330	<330	<330	<330	<330	<330	430	24,000	<330	<330	<330	<330	<330	<330	<330	<330	<3,300	<330	<330	--	--	--	--
Diethyl phthalate	<330	<330	<330	<330	<330	<330	<330	<330	<6,600	<330	<330	<330	<330	<330	<330	<330	<330	<3,300	<330	<330	63,000,000	2,000,000	470,000	470,000
Dimethyl phthalate	<330	<330	<330	<330	<330	<330	<330	<330	<6,600	<330	<330	<330	<330	<330	<330	<330	<330	<3,300	<330	<330	--	--	--	--
Hexachlorobenzene	<330	<330	<330	<330	<330	<330	<330	<330	<6,600	<330	<330	<330	<330	<330	<330	<330	<330	<3,300	<330	<330	400	1,000	2,000	11,000
Hexachlorobutadiene	<330	<330	<330	<330	<330	<330	<330	<330	<6,600	<330	<330	<330	<330	<330	<330	<330	<330	<3,300	<330	<330	--	--	--	--
Hexachlorocyclopentadiene	<330	<330	<330	<330	<330	<330	<330	<330	<6,600	<330	<330	<330	<330	<330	<330	<330	<330	<3,300	<330	<330	550,000	10,000	400,000	2,200,000
Hexachloroethane	<330	<330	<330	<330	<330	<330	<330	<330	<6,600	<330	<330	<330	<330	<330	<330	<330	<330	<3,300	<330	<330	78,000	--	500	2,600
Isophorone	<330	<330	<330	<330	<330	<330	<330	<330	<6,600	<330	<330	<330	<330	<330	<330	<330	<330	<3,300	<330	<330	15,600,000	4,600,000	8,000	8,000
N-Nitroso-di-n-propylamine	<330	<330	<330	<330	<330	<330	<330	<330	<6,600	<330	<330	<330	<330	<330	<330	<330	<330	<3,300	<330	<330	90	--	0.05	0.05
N-Nitrosodiphenylamine	<330	<330	<330	<330	<330	<330	<330	<330	<6,600	<330	<330	<330	<330	<330	<330	<330	<330	<3,300	<330	<330	130,000	--	1,000	5,600
Nitrobenzene	<330	<330	<330	<330	<330	<330	<330	<330	<6,600	<330	<330	<330	<330	<330	<330	<330	<330	<3,300	<330	<330	39,000	92,000	100	100

Notes:
Results listed in ug/kg (parts per billion)
EPA test method SW846, 8270
"<" indicates not detected at stated detection limits
"--" indicates value not available
"J" indicates analyte detected between limit of detection (LOD) and limit of quantitation (LOQ)
Shaded/Bolded cell indicates concentration detected above most stringent Tier 1 SRO
(1) Pursuant to 35 IAC 742-Tiered Approach to Corrective Action Objectives

RELEASABLE
SEP 14 2001
REVIEWER MD

TABLE NO. 4 (page 1 of 3)
Soil Sample Analytical Results: PNA Compounds
900 W. 18th St. / Chicago, Illinois

ANALYTE	B-2 (2-4)	B-4 (9-12)	B-5 (6-9)	B-6 (3-6)	B-7 (6-9)	B-9 (6-9)	B-10 (6-9)	B-11 (6-9)	B-12 (6-9)	B-13 (3-6)	B-15 (9-12)	B-16 (6-9)	B-17 (0-3)	B-17 (6-9)	B-18 (0-3)	Tier 1 Soil Remediation Objectives (Tier 1 SROs) Residential Property Use (1) Route Specific Values Ingestion	Migration to Groundwater Class I	Migration to Groundwater Class II
Naphthalene	< 30	< 30	180	320 "J"	< 850	2,300	1,100	< 30	< 30	180	150	< 30	<3.3	<3.3	13"J"	3,100,000	84,000	420,000
Acenaphthene	< 21	< 21	260	630	< 1,000	17,000	370	25 "J"	< 21	92	26 "J"	< 21	<3.3	<3.3	<66	4,700,000	570,000	2,900,000
Anthracene	< 36	< 36	180	8,900	< 975	60,000	550 "J"	54 "J"	< 36	360	56 "J"	< 36	<3.3	<3.3	21"J"	23,000,000	12,000,000	59,000,000
Fluoranthene	160	< 38	610	10,000	< 825	160,000	2,400	220	< 38	1,600	210	< 38	<3.3	<3.3	170	3,100,000	4,300,000	21,000,000
Fluorene	< 47	< 47	380	1,100	< 950	37,000	720 "J"	< 47	< 47	160	< 47	< 47	<3.3	<3.3	140	3,100,000	560,000	2,800,000
Pyrene	190	< 45	390	6,900	< 1,175	270,000	2,200	240	< 45	2,400	210	< 45	<3.3	<3.3	1.9"J"	2,300,000	4,200,000	21,000,000
CARCINOGENIC PNAs																		
Benzo(a)anthracene	100	< 23	230	4,700	< 900	86,000	910	130	< 23	820	94	< 23	<3.3	<3.3	200	900	2,000	8,000
Benzo(a)pyrene	110 "J"	< 34	180	4,000	< 1,000	78,000	770	120	< 34	430	110	< 34	<3.3	<3.3	30"J"	90	8,000	82,000
Benzo(b)fluoranthene	80 "J"	< 46	160	4,600	< 1,500	42,000	810	100 "J"	< 46	970	150 "J"	< 46	<3.3	12	19"J"	900	5,000	25,000
Benzo(k)fluoranthene	100 "J"	< 48	180	4,000	< 2,275	58,000	800	120 "J"	< 48	350	110 "J"	< 48	0.33"J"	<3.3	25"J"	9,000	49,000	250,000
Chrysene	100 "J"	< 42	250	3,800	< 1,000	94,000	1,100	130 "J"	< 42	1,000	120 "J"	< 42	1.1"J"	<3.3	17"J"	88,000	160,000	800,000
Dibenzo(a,h)anthracene	89	< 18	150	2,100	< 2,000	53,000	560	100	< 18	290	90	< 18	<3.3	<3.3	30"J"	90	2,000	7,600
Indeno(1,2,3-cd)pyrene	88	< 18	160	2,300	< 700	50,000	580	84	< 18	290	120	< 18	<3.3	<3.3	<66	900	14,000	69,000
NON-CARCINOGENIC PNAs																		
Acenaphthylene	< 24	< 24	< 24	< 120	< 1,025	12,000	190 "J"	42 "J"	< 24	110	< 24	< 24	<3.3	<3.3	<66	--	--	--
Benzo(g,h,i)perylene	86 "J"	< 29	150	2,200	< 2,000	74,000	560	73 "J"	< 29	300	89 "J"	< 29	<3.3	<3.3	10"J"	--	--	--
Phenanthrene	90 "J"	< 35	1,000	8,900	< 1,175	280,000	2,800	170	< 35	1,400	270	< 35	<3.3	<3.3	430	--	--	--

Notes:
Results listed in ug/kg (parts per billion)
EPA test method SW846, 8310
"<" indicates not detected at stated detection limits
"--" indicates value not available
"J" indicates analyte detected between limit of detection (LOD) and limit of quantitation (LOQ)
Shaded/Bolded cell indicates concentration detected above most stringent Tier 1 SRO
(1) Pursuant to rule 35 IAC 742-Tiered Approach to Corrective Action Objectives

TABLE NO. 4 (page 2 of 3)
Soil Sample Analytical Results: PNA Compounds
900 W. 18th St. / Chicago, Illinois

															Tier 1 Soil Remediation Objectives (Tier 1 SROs) Residential Property Use [1]		
															Route Specific Values	Migration to Groundwater	
ANALYTE	B-18 (8-10)	B-19 (0-3)	B-19 (3-6)	B-20 (0-3)	B-20 (6-9)	B-21 (0-3)	B-21 (6-9)	B-22 (0-3)	B-22 (6-9)	B-23 (0-3)	B-23 (6-9)	B-24 (0-3)	B-24 (6-9)	B-25 (0-3)	B-25 (6-9)	Ingestion	Class I	Class II
Naphthalene	<3.3	<3.3	14"J"	<3.3	4.5	<1300	<33	<3.3	<82	<3.3	<3.3	<3.3	89	9.7	<3.3	3,100,000	84,000	420,000
Acenaphthene	<3.3	0.53"J"	210	<3.3	1.5"J"	970"J"	45	<3.3	8.6"J"	0.37"J"	<3.3	<3.3	38"J"	5.2	9.8	4,700,000	570,000	2,900,000
Anthracene	<3.3	2"J"	310	0.51"J"	9.9	3,000	24"J"	<3.3	2.3"J"	1.3"J"	<3.3	<3.3	37"J"	6.1	<3.3	23,000,000	12,000,000	59,000,000
Fluoranthene	<3.3	7.9	1,900	5.1	5.9	13,000	81	2.5"J"	2.9"J"	12	<3.3	<3.3	130	38	3.3"J"	3,100,000	4,300,000	21,000,000
Fluorene	<3.3	0.73	330	<3.3	1.3"J"	1,900	<33	<3.3	17"J"	<3.3	<3.3	<3.3	140	16	1.5"J"	3,100,000	560,000	2,800,000
Pyrene	0.27"J"	6.7	1,300	4.2	4.1	8,900	86	2.4"J"	<82	12	<3.3	<3.3	78"J"	35	2.3"J"	2,300,000	4,200,000	21,000,000
CARCINOGENIC PNA'S																		
Benzo(a)anthracene	0.58"J"	14	910"J"	2.6"J"	2.2"J"	5,700	530"J"	1.8"J"	59"J"	7.1	1.9"J"	<3.3	79"J"	22"J"	2.1"J"	900	2,000	8,000
Benzo(a)pyrene	<3.3	5.3	1,570	2.4"J"	1.3"J"	13,400	54	1.7"J"	<82	7.8	1.2"J"	<3.3	23"J"	13	2.2"J"	90	8,000	82,000
Benzo(b)fluoranthene	0.31"J"	7.6	550"J"	2.8"J"	4.7	24,100	87	1.9"J"	<82	8.9	21	<3.3	50"J"	15	58	900	5,000	25,000
Benzo(k)fluoranthene	0.44"J"	4.3	300	1.4"J"	0.85"J"	2,100	16"J"	1.1"J"	5"J"	3.7	<3.3	0.36"J"	22"J"	6.7	1.3"J"	9,000	49,000	250,000
Chrysene	1.1"J"	4.3	1,900	6.2	1.6"J"	9,200	340"J"	3.4	27"J"	13	7.7	0.65"J"	29"J"	38	2.6"J"	88,000	160,000	800,000
Dibenzo(a,h)anthracene	<3.3	0.34"J"	<1,300	1.1"J"	1.2"J"	1800"J"	52	0.68"J"	<82	9.6	17	0.67"J"	<82	5	8.4	90	2,000	7,600
Indeno(1,2,3-cd)pyrene	<3.3	5.8	360	3.1"J"	0.68"J"	1,900	<33	1.4"J"	<82	6.7	<3.3	<3.3	<82	11	<3.3	900	14,000	69,000
NON-CARCINOGENIC PNA'S																		
Acenaphthylene	<3.3	<3.3	15"J"	<3.3	<3.3	<1300	50	<3.3	<82	4.4	<3.3	<3.3	21"J"	3.2"J"	<3.3	--	--	--
Benzo(g,h,i)perylene	0.33"J"	21	300	2.7"J"	0.94"J"	2,500	<33	2.3"J"	<82	9.3	<3.3	0.31"J"	<82	14	<3.3	--	--	--
Phenanthrene	<3.3	3.4	1400	2.4"J"	3.7	13,000	590"J"	1.4	22"J"	6	<3.3	<3.3	150	41	0.83"J"	--	--	--

Notes:
Results listed in ug/kg (parts per billion)
EPA test method SW846, 8310
"<" indicates not detected at stated detection limit
"--" indicates value not available
"J" indicates analyte detected between limit of detection (LOD) and limit of quantitation (LOQ)
Shaded/Bolded cell indicates concentration detected above most stringent Tier 1 SRO
(1) Pursuant to rule 35 IAC 742-Tiered Approach to Corrective Action Objectives

TABLE NO. 4 (page 3 of 3)
Soil Sample Analytical Results: PNA Compounds
900 W. 18th St. / Chicago, Illinois

ANALYTE	B-27 (0-3)	B-27 (6-8)	B-28 (0-3)	B-29 (6-9)	B-30 (2-4)	B-31 (4-6)	B-32 (0-3)	B-32 (9-12)	B-33 (0-3)	B-33 (6-9)	B-34 (0-3)	B-34 (9-12)	B-35 (0-3)	B-35 (6-9)	B-36 (6-9)	Tier 1 Soil Remediation Objectives (Tier 1 SROs) Residential Property Use (1) Route Specific Values: Ingestion	Migration to Groundwater: Class I	Migration to Groundwater: Class II
Naphthalene	<66	210	0.57"J"	29"J"	4.3"J"	<3.3	<3.3	<3.3	2.6"J"	<3.3	31"J"	<3.3	63	<3.3	<3.9	3,100,000	84,000	420,000
Acenaphthene	8.8"J"	240	0.38"J"	46"J"	16"J"	<3.3	<3.3	<3.3	9	<3.3	140	<3.3	380	<3.3	<3.9	4,700,000	570,000	2,900,000
Anthracene	14"J"	320	0.47"J"	33"J"	50	<3.3	<3.3	<3.3	22"J"	<3.3	50	<3.3	980	0.41"J"	<3.9	23,000,000	12,000,000	59,000,000
Fluoranthene	200	1,800	5.3	<66	300	<3.3	0.83"J"	<3.3	280	<3.3	<660	1.1"J"	5,300	2.7"J"	<3.9	3,100,000	4,300,000	21,000,000
Fluorene	<66	390	0.34"J"	220	6.5"J"	<3.3	<3.3	<3.3	4.2"J"	<3.3	160	<3.3	320"J"	<3.3	<3.9	3,100,000	560,000	2,800,000
Pyrene	170	1,300"J"	4.1	<66	280	0.29"J"	1.1"J"	0.27"J"	240	<3.3	<660	1.1"J"	5,000	2.5"J"	<3.9	2,300,000	4,200,000	21,000,000
CARCINOGENIC PNA's																		
Benzo(a)anthracene	96	710	3.4"J"	460	220	1.7"J"	1.1"J"	0.61"J"	150	<3.3	760	1.4"J"	2,400	1.8"J"	<3.9	900	2,000	8,000
Benzo(a)pyrene	100	600	3.1"J"	<66	230	<3.3	1"J"	<3.3	140	<3.3	610	0.54"J"	1,900	1.3"J"	<3.9	90	8,000	82,000
Benzo(b)fluoranthene	130	610"J"	4	33"J"	240	0.68	0.98"J"	3.9	210	18	630	67	1,800	3.6	1	900	5,000	25,000
Benzo(k)fluoranthene	49"J"	320	2"J"	7.5"J"	100	0.5"J"	0.64"J"	0.39"J"	61	0.29"J"	310	0.9"J"	930	0.86"J"	0.3	9,000	49,000	250,000
Chrysene	160	1,300	4.9"J"	29"J"	390	0.51"J"	1.3"J"	0.91"J"	270	<3.3	1300	1.7"J"	3,700	3.1"J"	0.58	88,000	160,000	800,000
Dibenzo(a,h)anthracene	44"J"	230	2.4"J"	6.8"J"	110	<3.3	0.70"J"	2"J"	170	1"J"	250	<3.3	790	0.51"J"	<3.9	90	2,000	7,600
Indeno(1,2,3-cd)pyrene	82	440	3.3"J"	<66	140	<3.3	1.1"J"	<3.3	130	<3.3	290	0.49"J"	950	0.61"J"	<3.9	900	14,000	69,000
NON CARCINOGENIC PNA's																		
Acenaphthylene	<66	3.8"J"	1"J"	<66	<33	<3.3	<3.3	<3.3	<33	<3.3	9.6"J"	<3.3	8.5"J"	<3.3	<3.9	–	–	–
Benzo(g,h,i)perylene	130	570	6.7	<66	130	<3.3	4	<3.3	170	<3.3	360	3.4	940	1.2"J"	<3.9	–	–	–
Phenanthrene	79	1,700	2.5	200	94	0.4"J"	0.93"J"	<3.3	150	<3.3	1300	<3.3	4,200	1.2"J"	<3.9	–	–	–

Notes:
Results listed in ug/kg (parts per billion)
EPA test method SW846, 8310
"<" indicates not detected at stated detection limits
"–" indicates value not available
"J" indicates analyte detected between limit of detection (LOD) and limit of quantitation (LOQ)
Shaded/Bolded cell indicates concentration detected above most stringent Tier 1 SRO
(1) Pursuant to rule 35 IAC 742-Tiered Approach to Corrective Action Objectives

TABLE NO. 5
Soil Sample Analytical Results: BTEX
900 W. 18th St. / Chicago, Illinois

							Tier 1 Soil Remediation Objectives (Tier 1 SROs) Residential Property Use [1]			
							Route Specific Values		*Soil Component of Groundwater Ingestion Exposure Route*	
ANALYTE	*B-13 (3-6)*	*B-15 (9-12)*	*B-16 (6-9)*	*B-34 (9-12)*	*B-35 (6-9)*	*B-36 (6-9)*	*Ingestion*	*Inhalation*	*Class I*	*Class II*
Benzene	< 10	< 10	< 10	<5	<5.6	<6	22,000	800	30	170
Toluene	40	25	< 10	<5	<5.6	<6	16,000,000	650,000	12,000	29,000
Ethylbenzene	< 10	< 10	< 10	<5	<5.6	<6	7,800,000	400,000	13,000	19,000
Xylenes (total)	< 30	< 30	< 30	<5	<5.6	<6	160,000,000	410,000	150,000	150,000

Notes:

Results listed in ug/kg (parts per billion)
EPA test method SW846, 8260/5035
"<" indicates not detected at stated detection limits
"J" indicates analyte detected between limit of detection (LOD) and limit of quantitation (LOQ)
Shaded/Bolded cell indicates concentration detected above most stringent Tier 1 SRO
(1) Pursuant to 35 IAC 742-Tiered Approach to Corrective Action Objectives

TABLE NO. 6 (page 1 of 2)
Soil Sample Analytical Results:RCRA 8 Total Metals Plus Zinc - pH>8
900 W. 18th St./ Chicago, Illinois

ANALYTE	B-3 (6-9)	B-4 (9-12)	B-6 (3-6)	B-7 (6-9)	B-8 (6-9)	B-9 (6-9)	B-10 (6-9)	B-17 (0-3)	B-17 (6-9)	B-18 (0-3)	B-18 (8-10)	B-19 (0-3)	B-19 (3-6)	B-20 (0-3)	B-21 (0-3)	Tier 1 Soil Remediation Objectives (Tier 1 SROs) Residential Property Use [1] Route Specific Values: Ingestion	Inhalation	pH > 8.0 Background [2]
pH	8.1	8.2	11.2	NA	11.0	9.3	10.7	9.6	8.1	9.3	8.8	9.2	9.7	8.7	11			
Arsenic	5,900	5,200	5,300	11,000	1,900 "J"	4,300	18,000	1,220	3,480	1,790	4,370	1,950	7,390	1,970	12,100	13,000[3]	750,000	13,000
Barium	14,000	37,000	88,000	36,000	14,000	44,000	59,000	1,730	37,600	2,000	81,700	5,120	62,600	4,220	167,000	5,500,000	690,000,000	110,000
Cadmium	< 1,200	< 1,200	2,100 "J"	< 1,200	< 1,200	< 1,200	3,400	<500	<500	<500	<500	<500	748	<500	1,990	78,000	1,800,000	600
Chromium	6,800	9,200	6,600	7,200	2,600	15,000	13,000	<1000	9,300	<1000	4,380	<1000	10,600	<1000	6,330	390,000	270,000	16,200
Lead	< 6,000	< 6,000	1,610,000	753,000	142,000	940,000	3,250,000	1,050	9,240	4,160	442,000	86,300	1,830,000	27,300	3,070,000	400,000	--	36,000
Mercury	< 30	< 30	315	51	191	209	439	<33	<33	<33	1,540	108	1,600	<33	1,240	23,000	10,000	60
Selenium	< 2,500	< 2,500	< 2,500	< 2,500	< 2,500	< 2,500	< 2,500	<500	790	<500	686	<500	536	<500	818	390,000	--	480
Silver	< 3,000	< 3,000	< 3,000	< 3,000	< 15,000	< 3,000	< 3,000	<1000	<1000	<1000	<1000	<1000	1350	<1000	1,090	390,000	--	550
Zinc	156,000	39,000	1,355,000	28,000	32,000	44,000	376,000	--	--	--	--	--	--	--	--	23,000,000	--	95,000

Notes:
Results listed in ug/kg (parts per billion)
"<" indicates not detected at stated detection limits
"--" indicates not analyzed or value not available
"J" indicates analyte detected between limit of detection (LOD) and limit of quantitation (LOQ)
Shaded/bolded cell indicates concentration detected above most stringent Tier 1 SRO
(1) Pursuant to 35 IAC 742-Tiered Approach to Corrective Action Objectives
(2) Background concentration identified in Appendix A, Table G
(3) No pH-specific values are available for this compound or pH level, therefore the background concentration as identified in 35 IAC 742, Appendix A, Table G is used for comparison

TABLE NO. 6 (page 2 of 2)
Soil Sample Analytical Results: RCRA 8 Total Metals Plus Zinc - pH>8
900 W. 18th St. / Chicago, Illinois

ANALYTE	B-21 (6-9)	B-22 (0-3)	B-23 (0-3)	B-23 (6-9)	B-24 (0-3)	B-24 (6-9)	B-25 (6-9)	B-27 (0-3)	B-27 (6-6)	B-28 (0-3)	B-29 (6-9)	B-32 (9-12)	B-33 (6-9)	B-34 (0-3)	Tier 1 Soil Remediation Objectives (Tier 1 SROs) Residential Property Use: Ingestion	Inhalation	pH > 8.0 Background
															Route Specific Values		
pH	8.3	8.8	8.6	8.2	8.8	11	12.0	11.0	11.0	12.0	8.6	8.2	8.2	8.2			
Arsenic	4,620	1,430	1,900	3,150	1,760	2,160	1,140	1,700	1,980	1,870	4,900	5,450	5,520	10,600	13,000[3]	750,000	13,000
Barium	14,100	2,730	2,260	13,900	1,980	16,000	7,210	13,400	18,000	5,200	14,000	35,600	21,300	175,000	5,500,000	690,000,000	110,000
Cadmium	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	2,850	78,000	1,800,000	600
Chromium	3,720	<1000	<1000	5,310	<1000	2,760	3,000	3,120	5,070	2,610	5,600	12,100	5,000	10,400	390,000	270,000	16,200
Lead	318,000	803	9,630	8,350	4,360	177,000	105,000	46,600	306,000	21,900	8,090	40,600	2,250,000	1,180,000	400,000	--	36,000
Mercury	761	36	615	<33	<33	33	89	45.6	1,175	110	<33	<33	194	1,295	23,000	10,000	60
Selenium	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	390,000	--	480
Silver	<1000	<1000	<1000	<1000	<1000	<1000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	390,000	--	550
Zinc	--	--	--	--	--	--	--	--	--	--	--	--	--	--	23,000,000	--	95,000

Notes:
Results listed in ug/kg (parts per billion)
"<" indicates not detected at stated detection limits
"--" indicates not analyzed or value not available
"J" indicates analyte detected between limit of detection (LOD) and limit of quantitation (LOQ)
Shaded/Bolded cell indicates concentration detected above most stringent Tier 1 SRO
(1) Pursuant to 35 IAC 742-Tiered Approach to Corrective Action Objectives
(2) Background concentration identified in Appendix A, Table G
(3) No pH-specific values are available for this compound or pH level, therefore the background concentration as identified in 35 IAC 742, Appendix A, Table G is used for comparison

TABLE NO. 7 (page 1 of 2)
Soil Sample Analytical Results: RCRA 8 Total Metals Plus Zinc - pH<8
900 W. 18th St. / Chicago, Illinois

			Tier 1 Soil Remediation Objectives (Tier 1 SROs) Residential Property Use [1]					
			Route Specific Values		*pH = 6.9 to 7.24*		*pH = 7.75 to 8.0*	
ANALYTE	*B-1 (0-3)*	*B-13 (3-6)*	*Ingestion*	*Inhalation*	*Class I*	*Class II*	*Class I*	*Class II*
pH	7.1	7.6						
Arsenic	1,100 "J"	6,300	13,000[2]	750,000	29,000	120,000	31,000	120,000
Barium	11,000	335,000	5,500,000	690,000,000	1,700,000	1,700,000	2,100,000	2,100,000
Cadmium	< 1,200	< 1,200	78,000	1,800,000	11,000	110,000	430,000	4,300,000
Chromium	3,400	7,300	390,000	270,000	36,000	--	28,000	--
Lead	**298,000**	**368,000**	400,000	--	36,000[3]	36,000[3]	36,000[3]	36,000[3]
Mercury	< 30	3,362	23,000	10,000	3,300	16,000	8,000	40,000
Selenium	< 2,500	< 2,500	390,000	--	4,500	4,500	2,400	2,400
Silver	< 9,000	< 3,000	390,000	--	13,000	--	110,000	--
Zinc	29,000	NA	23,000,000	--	7,500,000	15,000,000	53,000,000	110,000,000

Notes:

Results listed in ug/kg (parts per billion)
"<" indicates not detected at stated detection limits
"--" indicates value not available
"J" indicates analyte detected between limit of detection (LOD) and limit of quantitation (LOQ)
Shaded/Bolded cell indicates concentration detected above most stringent Tier 1 SRO
(1) Pursuant to 35 IAC 742-Tiered Approach to Corrective Action Objectives
(2) Background concentration identified in Appendix A, Table G
(3) No pH-specific values are available for this compound, therefore the background concentration as identified in 35 IAC 742, Appendix A, Table G is used for comparison

TABLE NO. 7 (page 2 of 2)
Soil Sample Analytical Results: RCRA 8 Total Metals - pH<8
900 W. 18th St. / Chicago, Illinois

				Tier 1 Soil Remediation Objectives (Tier 1 SROs)			
				Residential Property Use [1]			
				Route Specific Values		*pH = 7.75 to 8.0*	
ANALYTE	*B-32 (0-3)*	*B-33 (6-9)*	*B-35 (0-3)*	*Ingestion*	*Inhalation*	*Class I*	*Class II*
pH	8.0	7.7	8.0				
Arsenic	2,690	6,450	10,700	13,000[2]	750,000	31,000	120,000
Barium	14,200	11,700	172,000	5,500,000	690,000,000	2,100,000	2,100,000
Cadmium	<500	<500	2,310	78,000	1,800,000	430,000	4,300,000
Chromium	2,750	7,380	10,100	390,000	270,000	28,000	--
Lead	**756,000**	6,920	**1,260,000**	400,000	--	36,000[3]	36,000[3]
Mercury	**234**	<33	1,040	23,000	10,000	8,000	40,000
Selenium	<500	<500	998	390,000	--	2,400	2,400
Silver	<1,000	<1,000	<1,000	390,000	--	110,000	--

Notes:

Results listed in ug/kg (parts per billion)
"<" indicates not detected at stated detection limits
"--" indicates value not available
Shaded/Bolded cell indicates concentration detected above most stringent Tier 1 SRO
(1) Pursuant to 35 IAC 742-Tiered Approach to Corrective Action Objectives
(2) Background concentration identified in Appendix A, Table G
(3) No pH-specific values are available for this compound or pH level, therefore the background concentration as identified in 35 IAC 742, Appendix A, Table G is used for comparison

TABLE NO. 8

Soil Sample Analytical Results: Priority Pollutant Total Metals plus Cyanide - pH>8
900 W. 18th St. / Chicago, Illinois

					Tier 1 Soil Remediation Objectives (Tier 1 SROs) Residential Property Use [1]		
					Route Specific Values		pH > 8.0
ANALYTE	B-2 (2-4)	B-5 (6-9)	B-11 (6-9)	B-12 (3-6)	Ingestion	Inhalation	Background [3]
pH	8.4	10.4	8.6	8.1			
Arsenic	2,900	6,800	3,800	3,700	13,000[2]	750,000	13,000
Barium	60,000	36,000	22,000	19,000	5,500,000	690,000,000	110,000
Beryllium	< 120	**320 "J"**	< 120	< 120	100	1,300,000	590
Cadmium	< 1,200	< 1,200	< 1,200	**13,000**	78,000	1,800,000	600
Chromium	7,000	15,000	6,100	6,000	390,000	270,000	16,200
Cobalt	**11,000**	**12,000**	4,700 "J"	4,500 "J"	4,700,000	--	8,900
Copper	5,300	**20,000**	8,500	**29,000**	2,900,000	--	19,600
Cyanide	< 24	< 26	49 "J"	24 "J"	1,600,000	--	510
Lead	**83,000**	**53,000**	**1,180,000**	**789,000**	400,000	--	36,000
Mercury	**109**	**680**	**514**	**1,510**	23,000	10,000	60
Nickel	4,900	**19,000**	6,700	6,700	1,600,000	13,000,000	18,000
Selenium	< 2,500	< 2,500	< 2,500	< 2,500	390,000	--	480
Silver	< 3,000	< 3,000	< 3,000	< 3,000	390,000	--	550
Zinc	17,000	82,000	43,000	**7,320,000**	23,000,000	--	95,000

Notes:

Results listed in ug/kg (parts per billion)
"<" indicates not detected at stated detection limits
"--" indicates value not available
NA indicates not analyzed
"J" indicates analyte detected between limit of detection (LOD) and limit of quantitation (LOQ)
Shaded/Bolded cell indicates concentration detected above most stringent Tier 1 SRO
(1) Pursuant to 35 IAC 742-Tiered Approach to Corrective Action Objectives
(2) Background concentration identified in Appendix A, Table G
(3) No pH-specific values are available for this compound or pH level, therefore the background concentration as identified in 35 IAC 742, Appendix A, Table G is used for comparison

TABLE NO. 9
Soil Sample Analytical Results: SPLP Metals
900 W. 18th St. / Chicago, Illinois

						Tier I Soil Remediation Objectives (1)	
ANALYTE	*B-17 (6-9)*	*B-18 (8-10)*	*B-19 (3-6)*	*B-21 (0-3)*	*B-34 (0-3)*	*Class I*	*Class II*
SPLP Barium	--	--	--	138	118	2,000	2,000
SPLPCadmium	--	--	--	<3	<3	5	50
SPLP Lead	--	--	848	17.7	--	7.5	100
SPLP Mercury	--	<0.2	--	<0.2	--	2	10
SPLP Selenium	<5	--	--	<5	--	50	50
SPLP Silver	--	--	<5	<5	--	50	--

Notes:

Results listed in ug/L (parts per billion)
"<" indicates not detected at stated detection limits
"--" indicates not analyzed or value not available
NA indicates not analyzed
(1) Pursuant to 35 IAC 742-Tiered Approach to Corrective Action Objectives

TABLE NO. 10
Soil Sample Analytical Results: Total, SPLP & TCLP Lead
900 W. 18th St. / Chicago, Illinois

ANALYTE	B-6 (3-6)	B-10 (6-9)	B-15 (0-3)	B-18 (8-10)	B-19 (0-3)	B-19 (3-6)	B-46 (3-6)	B-47 (0-3)	B-47 (3-6)	B-47 (6-9)	B-48 (3-6)	B-49 (3-6)	B-50 (0-3)	B-50 (3-6)	B-50 (6-9)	B-51 (0-3)	Tier 1 Soil Remediation Objective
Total Lead	1,610,000	3,250,000	4,160	442,000	86,300	4,838,000	1,770,000	--	3,240,000	--	--	--	--	--	--	--	400,000
SPLP Lead	--	--	--	--	--	848	--	--	--	--	--	--	--	--	--	--	100
TCLP Lead	136	<5	--	--	--	12,000	88,000	89	37,600	<100	<100	103	<100	<50	<50	105	5,000

ANALYTE	B-51 (3-6)	B-51 (6-9)	B-52 (3-6)	B-52 (6-9)	B-57 (3-6)	B-58 (3-6)	B-60 (3-6)	B-60 (6-9)	B-61 (3-6)	B-61 (6-9)	B-62 (3-6)	B-63 (3-6)	B-63 (6-9)	B-64 (3-6)	B-64 (6-9)	B-65 (3-6)	Tier 1 Soil Remediation Objective
Total Lead	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	400,000
SPLP Lead	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	100
TCLP Lead	9,870	<100	1,167,000	<100	<100	2,240	18,600	<100	15,000	<100	278	3,430	92,500	3,780	653	16,600	5,000

Notes:
Results listed in ug/Kg or ug/L (parts per billion)
"<" indicates not detected at stated detection limits
"--" indicates not analyzed

TABLE NO. 11
Soil Sample Analytical Results: Carbazole
900 W. 18th St. / Chicago, Illinois

																	Tier 1 Soil Remediation Objectives (Tier 1 SROs) Residential Property Use [1]			
																	Route Specific Values		*Migration to Groundwater*	
ANALYTE	*B-34 (0-3)*	*B-35 (0-3)*	*B-39 (3-6)*	*B-40 (3-6)*	*B-40 (6-9)*	*B-41 (3-6)*	*B-41 (6-9)*	*B-42 (3-6)*	*B-42 (6-9)*	*B-43 (0-3)*	*B-43 (3-6)*	*B-44 (6-9)*	*B-45 (6-9)*	*B-52 (0-3)*	*B-53 (0-3)*	*B-54 (0-3)*	*B-55 (0-3)*	*Ingestion*	*Inhalation*	*Class I*	*Class II*
Carbazole	1,000	**12,000**	<330	<330	<330	<330	<330	49"J"	<330	<330	310"J"	<330	<330	**2,200**	<330	580	**720**	32,000	--	600	2,800

Notes:

Results listed in ug/kg (parts per billion)
EPA test method SW846, 8270
"<" indicates not detected at stated detection limits
"--" indicates value not available
"J" indicates analyte detected between limit of detection (LOD) and limit of quantitation (LOQ)
Shaded/Bolded cell indicates concentration detected above most stringent Tier 1 SRO
(1) Pursuant to 35 IAC 742-Tiered Approach to Corrective Action Objectives

TABLE NO. 12
Groundwater Sample Analytical Results: VOCs
900 W. 18th St. / Chicago, Illinois

						Tier 1 Groundwater Remediation Objectives (Tier 1 GROs) [1]	
ANALYTE	*MW-1*	*MW-2*	*MW-3*	*Duplicate*	*EQ*	*Class I*	*Class II*
2-Butanone (MEK)	<20	<20	<20	<20	<20	--	--
2-Hexanone	<10	<10	<10	<10	<10	--	--
4-Methyl-2-pentanone (MIBK)	<10	<10	<10	<10	<10	--	--
1,1-Dichloroethane	<5	<5	<5	<5	<5	700	3,500
1,1-Dichloroethene	<5	<5	<5	<5	<5	7	35
1,2-Dibromo-3-Chloropropane	<5	<5	<5	<5	<5	0.2	0.2
1,2-Dibromoethane	<5	<5	<5	<5	<5	0.05	0.5
1,2-Dichloroethane	<5	<5	<5	<5	<5	5	25
1,2-Dichloropropane	<5	<5	<5	<5	<5	5	25
1,3-Dichloropropene (total)	<10	<10	<10	<10	<10	1	5
1,1,1-Trichloroethane	<5	<5	<5	<5	<5	200	1,000
1,1,2-Trichloroethane	<5	<5	<5	<5	<5	5	50
1,1,2,2-Tetrachloroethane	<5	<5	<5	<5	<5	--	--
Acetone	<100	<100	<100	<100	<100	700	700
Benzene	<5	<5	<5	<5	<5	5	25
Bromodichloromethane	<5	<5	<5	<5	<5	0.02	0.02
Bromoform	<5	<5	<5	<5	<5	0.2	0.2
Bromomethane	<10	<10	<10	<10	<10	9.8	49
n-Butanol	<500	<500	<500	<500	<500	700	700
Carbon Disulfide	<5	220	<5	<5	<5	700	3,500
Carbon Tetrachloride	<5	<5	<5	<5	<5	5	25
Chlorobenzene	<5	<5	<5	<5	<5	100	500
Chlorodibromomethane	<5	<5	<5	<5	<5	140	140
Chloroethane	<10	<10	<10	<10	<10	--	--
Chloroform	<5	<5	<5	<5	<5	0.02	0.1
Chloromethane	<10	<10	<10	<10	<10	--	--
cis-1,2-Dichloroethene	<5	<5	<5	<5	<5	70	200
Ethylbenzene	<5	<5	<5	<5	<5	700	1,000
Methylene Chloride	<5	<5	<5	<5	<5	5	50
Styrene	<5	<5	<5	<5	<5	100	500
Tetrachloroethene	<5	<5	<5	<5	<5	5	25
Toluene	<5	<5	<5	<5	<5	1,000	2,500
trans-1,2-Dichloroethene	<5	<5	<5	<5	<5	100	500
Trichloroethene	<5	<5	<5	<5	<5	5	25
Vinyl Acetate	<10	<10	<10	<10	<10	7,000	7,000
Vinyl Chloride	<10	<10	<10	<10	<10	2	10
Total Xylenes	<5	<5	<5	<5	<5	10,000	10,000

Notes:

Results in ug/L (parts per billion)
EPA test method SW846, 8260
"<" indicates not detected at stated detection limits
"--" indicates value not available
(1) Pursuant to 35 IAC 742-Tiered Approach to Corrective Action Objectives

TABLE NO. 13
Groundwater Sample Analytical Results: Acid Extractable Compounds
900 W. 18th St. / Chicago, Illinois

ANALYTE	MW-1	MW-2	MW-3	MW-4	Duplicate	EQ	Tier I Groundwater Remediation Objectives (Tier I GROs) (1) Class I	Class II
2,4,5-Trichlorophenol	<10	<10	<10	<10	<10	<10	700	3,500
2,4,6-Trichlorophenol	<5	<5	<5	<5	<5	<5	6.4	32
2,4-Dichlorophenol	<5	<5	<5	<5	<5	<5	21	21
2,4-Dimethylphenol	<5	<5	<5	<5	<5	<5	140	140
2,4-Dinitrophenol	<25	<25	<25	<25	<25	<25	14	14
2-Chlorophenol	<5	<5	<5	<5	<5	<5	35	175
2-Methyl-4,6-dinitrophenol	<25	<25	<25	<25	<25	<25	--	--
2-Methylphenol (o-Cresol)	<5	<5	<5	<5	<5	<5	350	350
2-Nitrophenol	<5	<5	<5	<5	<5	<5	--	--
4-Chloro-3-methylphenol	<5	<5	<5	<5	<5	<5	--	--
4-Methylphenol (p-Cresol)	<5	<5	<5	<5	<5	<5	350	350
4-Nitrophenol	<25	<25	<25	<25	<25	<25	--	--
Benzoic Acid	<25	<25	<25	38	<25	<25	28,000	28,000
Pentachlorophenol	<25	<25	<25	<25	<25	<25	1.0	5.0
Phenol	<5	<5	<5	10	<5	<5	100	100

Notes:

Results in ppb (parts per billion)
EPA Test Method SW846, 8270
"<" indicates not detected at stated detection limits
"--" indicates value not available
(1) Pursuant to 35 IAC 742-Tiered Approach to Corrective Action Objectives

TABLE NO. 14

Groundwater Sample Analytical Results: Base/Neutral Extractable Compounds
900 W. 18th St. / Chicago, Illinois

ANALYTE	MW-1	MW-2	MW-3	MW-4	Duplicate	EQ	Tier I Groundwater Remediation Objectives (Tier I GROs) [1] Class I	Class II
1,2,4-Trichlorobenzene	<5	<5	<5	<5	<5	<5	70	700
1,2-Dichlorobenzene	<5	<5	<5	<5	<5	<5	600	1500
1,3-Dichlorobenzene	<5	<5	<5	<5	<5	<5	--	--
1,4-Dichlorobenzene	<5	<5	<5	<5	<5	<5	75	375
2,4-Dinitrotoluene	<5	<5	<5	<5	<5	<5	0.02	0.02
2,6-Dinitrotoluene	<5	<5	<5	<5	<5	<5	0.1	0.1
2-Chloronaphthalene	<5	<5	<5	<5	<5	<5	--	--
2-Methylnaphthalene	<5	<5	<5	38	<5	<5	--	--
2-Nitroaniline	<25	<25	<25	<25	<25	<25	--	--
3,3'-Dichlorobenzidine	<10	<10	<10	<10	<10	<10	20	100
3-Nitroaniline	<25	<25	<25	<25	<25	<25	--	--
4-Bromophenylphenylether	<5	<5	<5	<5	<5	<5	--	--
4-Chloroaniline	<5	<5	<5	<5	<5	<5	28	28
4-Chlorophenylphenylether	<5	<5	<5	<5	<5	<5	--	--
4-Nitroaniline	<25	<25	<25	<25	<25	<25	--	--
Bis(2-chloroethoxy)methane	<5	<5	<5	<5	<5	<5	--	--
Bis(2-chloroethyl)ether	<5	<5	<5	<5	<5	<5	10	10
Bis(2-ethylhexyl)phthalate	<5	<5	<5	<5	<5	<5	6.0	60
Butylbenzylphthalate	<5	<5	<5	<5	<5	<5	1,400	7,000
Carbazole	<5	<5	<5	<5	<5	<5	--	--
Di-n-butyl phthalate	<5	<5	<5	<5	<5	<5	--	--
Di-n-octyl phthalate	<5	<5	<5	<5	<5	<5	140	700
Dibenzofuran	<5	<5	<5	<5	<5	<5	--	--
Diethyl phthalate	<5	<5	<5	<5	<5	<5	5,600	5,600
Dimethyl phthalate	<5	<5	<5	<5	<5	<5	--	--
Hexachlorobenzene	<5	<5	<5	<5	<5	<5	0.06	0.3
Hexachlorobutadiene	<5	<5	<5	<5	<5	<5	--	--
Hexachlorocyclopentadiene	<5	<5	<5	<5	<5	<5	50	500
Hexachloroethane	<5	<5	<5	<5	<5	<5	7.0	35
Isophorone	<5	<5	<5	<5	<5	<5	1,400	1,400
N-Nitroso-di-n-propylamine	<5	<5	<5	<5	<5	<5	10	10
N-Nitrosodiphenylamine	<5	<5	<5	<5	<5	<5	10	50
Nitrobenzene	<5	<5	<5	<5	<5	<5	3.5	3.5

Notes:

Results in ppb (parts per billion)
EPA Test Method SW846, 8270
"<" indicates not detected at stated detection limits
"--" indicates value not available
(1) Pursuant to 35 IAC 742-Tiered Approach to Corrective Action Objectives

TABLE NO. 15
Groundwater Sample Analytical Results: PNAs
900 W. 18th St. / Chicago, Illinois

							Tier 1 Groundwater Remediation Objectives (Tier 1 GROs) [1]	
ANALYTE	*MW-1*	*MW-2*	*MW-3*	*MW-4*	*Duplicate*	*EQ*	*Class I*	*Class II*
Naphthalene	<0.1	<0.1	<0.1	8.1	<0.1	<0.1	25	39
Acenaphthene	<0.1	0.12	<0.1	0.68	<0.1	<0.1	420	2,100
Anthracene	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	2,100	10,500
Fluoranthene	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	280	1,400
Fluorene	<0.1	<0.1	<0.1	2.6	<0.1	<0.1	280	1,400
Pyrene	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	210	1,050
CARCINOGENIC PNAs								
Benzo(a)anthracene	<0.1	<0.1	<0.1	0.13	<0.1	<0.1	0.13	0.65
Benzo(a)pyrene	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	2.0
Benzo(b)fluoranthene	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.18	0.9
Benzo(k)fluoranthene	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.17	0.85
Chrysene	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1.5	7.5
Dibenzo(a,h)anthracene	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.3	1.5
Indeno(1,2,3-cd)pyrene	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.43	2.15
NON-CARCINOGENIC PNAs								
Acenaphthylene	<0.1	<0.1	0.23	0.89	<0.1	<0.1	--	--
Benzo(g,h,i)perylene	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	--	--
Phenanthrene	<0.1	<0.1	<0.1	<2	<0.1	<0.1	--	--

Notes:

Results in ug/L (parts per billion)
EPA test method SW846, 8310
"<" indicates not detected at stated detection limits
"--" indicates value not available
Shaded/Bolded cell indicates concentration detected above most stringent Tier 1 GRO
(1) Pursuant to 35 IAC 742-Tiered Approach to Corrective Action Objectives

TABLE NO. 16
Groundwater Sample Analytical Results: Priority Pollutant Total Metals
900 W. 18th St. / Chicago, Illinois

									Tier 1 Groundwater Remediation Objectives (Tier 1 GROs) [1]	
ANALYTE	*MW-1*	*MW-2*	*MW-2*	*MW-3*	*MW-4*	*MW-4*	*Duplicate*	*EQ*	*Class I*	*Class II*
Date	*3/15/01*	*3/15/01*	*4/12/01*	*3/15/01*	*3/15/01*	*4/12/01*	*3/15/01*	*3/15/01*		
Antimony	**9.46**	**21.7**	--	**21.8**	**10.4**	--	**11**	<5	6	24
Arsenic	13.7	8.97	--	17.8	6.37	--	10.5	<5	50	200
Beryllium	<3	<3	--	<3	<3	--	<3	<3	4	500
Cadmium	<5	<5	--	<5	<5	--	<5	<5	5	50
Chromium	<10	<10	--	<10	<10	--	<10	<10	100	1,000
Copper	<10	<10	--	<10	29.8	--	11.7	<10	650	650
Lead	<5	**117**	**36.3**	**60.8**	**238**	**301**	7.45	<5	7.5	100
Mercury	<0.2	<0.2	--	<0.2	<0.2	--	<0.2	<0.2	2	10
Nickel	34.8	72.3	--	<20	<20	--	35.4	<20	100	2,000
Selenium	<5	<5	--	<5	<5	--	<5	<5	50	50
Silver	<10	<10	--	<10	<10	--	<10	<10	50	--
Thallium	**5.01**	<5	--	<5	**5.17**	--	**5.94**	<5	2	20
Zinc	201	705	--	22.6	3,680	--	95.9	<20	5,000	10,000

Notes:

Results in ug/L (parts per billion)
"<" indicates not detected at stated detection limits
"--" indicates not analyzed or value not available
Shaded/Bolded cell indicates concentration detected above most stringent Tier 1 GRO
(1) Pursuant to 35 IAC 742-Tiered Approach to Corrective Action Objectives

APPENDIX A

USGS/ISGS MAPS

The appearance of some of the images

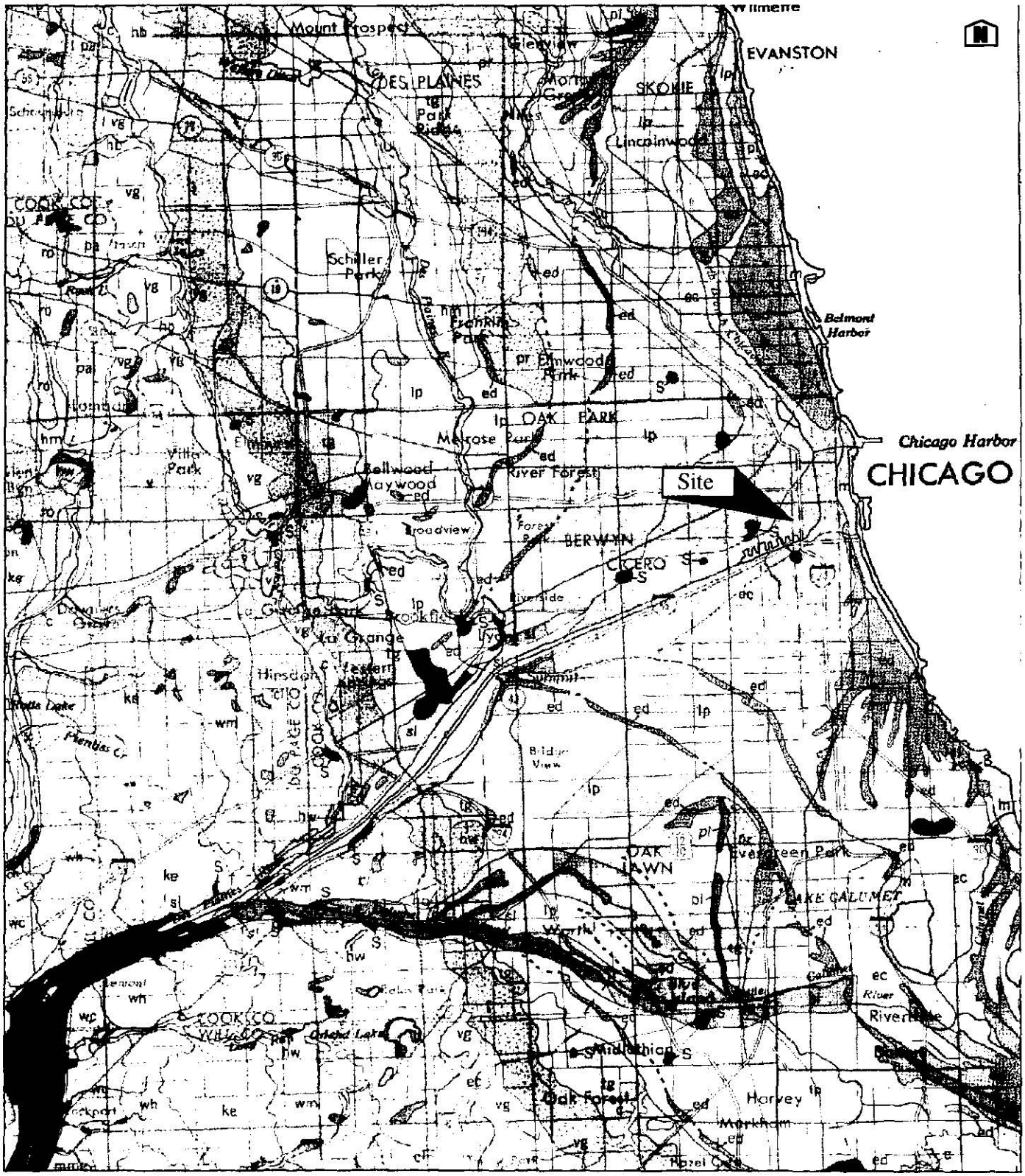
following this page is due to

Poor Quality Original Documents

and not the scanning or filming processes.

Com Microfilm Company
(217) 525-5860

J:\toolbox\poorDocs.doc



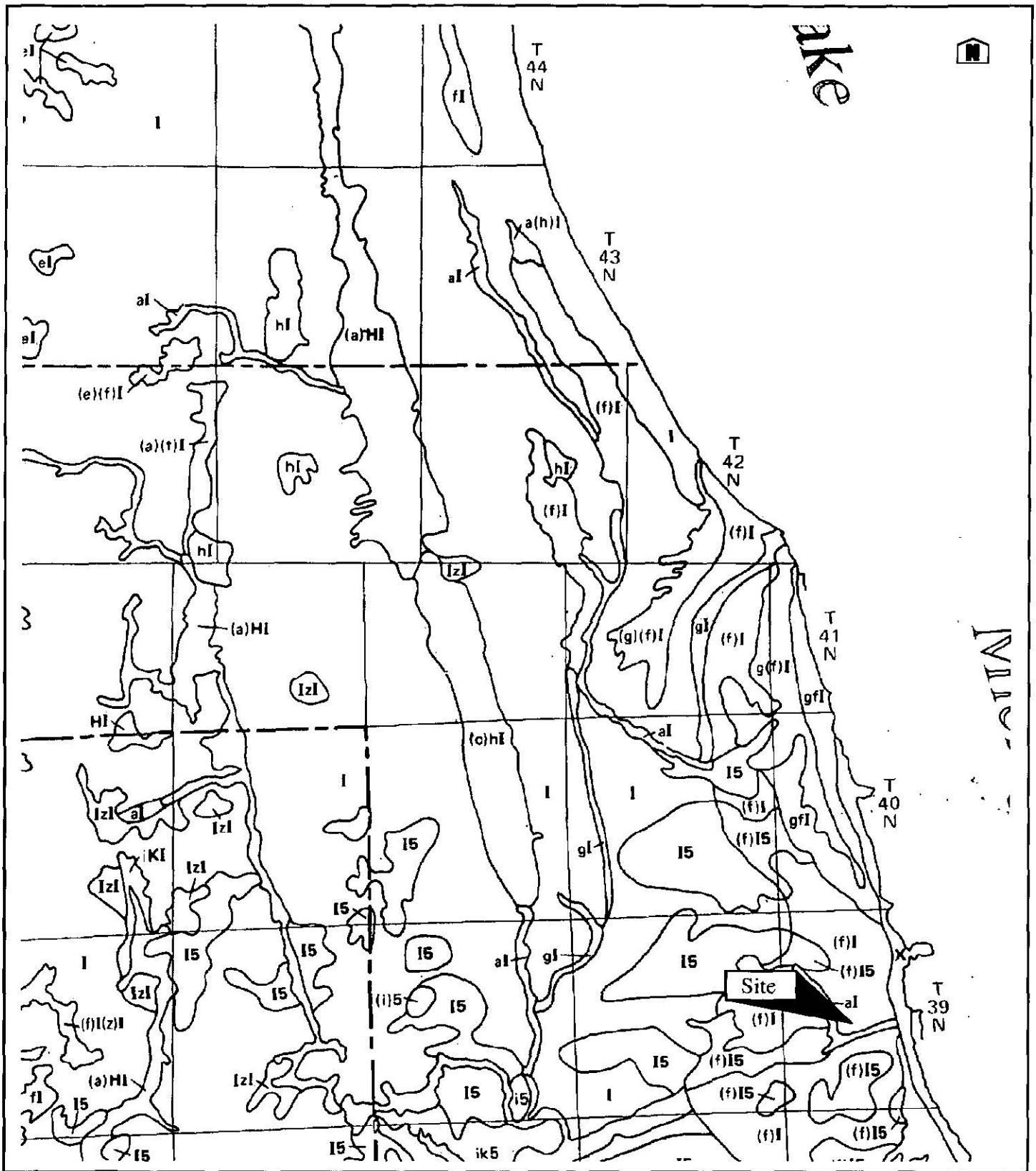
PIONEER ENVIRONMENTAL, INC.

900 W. 18th Street
Chicago, Illinois
T.39N, R.14E., SEC. 20

ISGS MAP
Surficial Geology of the Chicago Region
Scale 1:250,000
1970

KEY: ec = Carmi Member of Equality Formation
DESCRIPTION: Largely quiet-water lake sediments; dominantly well-bedded silt, locally laminated and containing thin beds of clay.

Project Number: 00868C



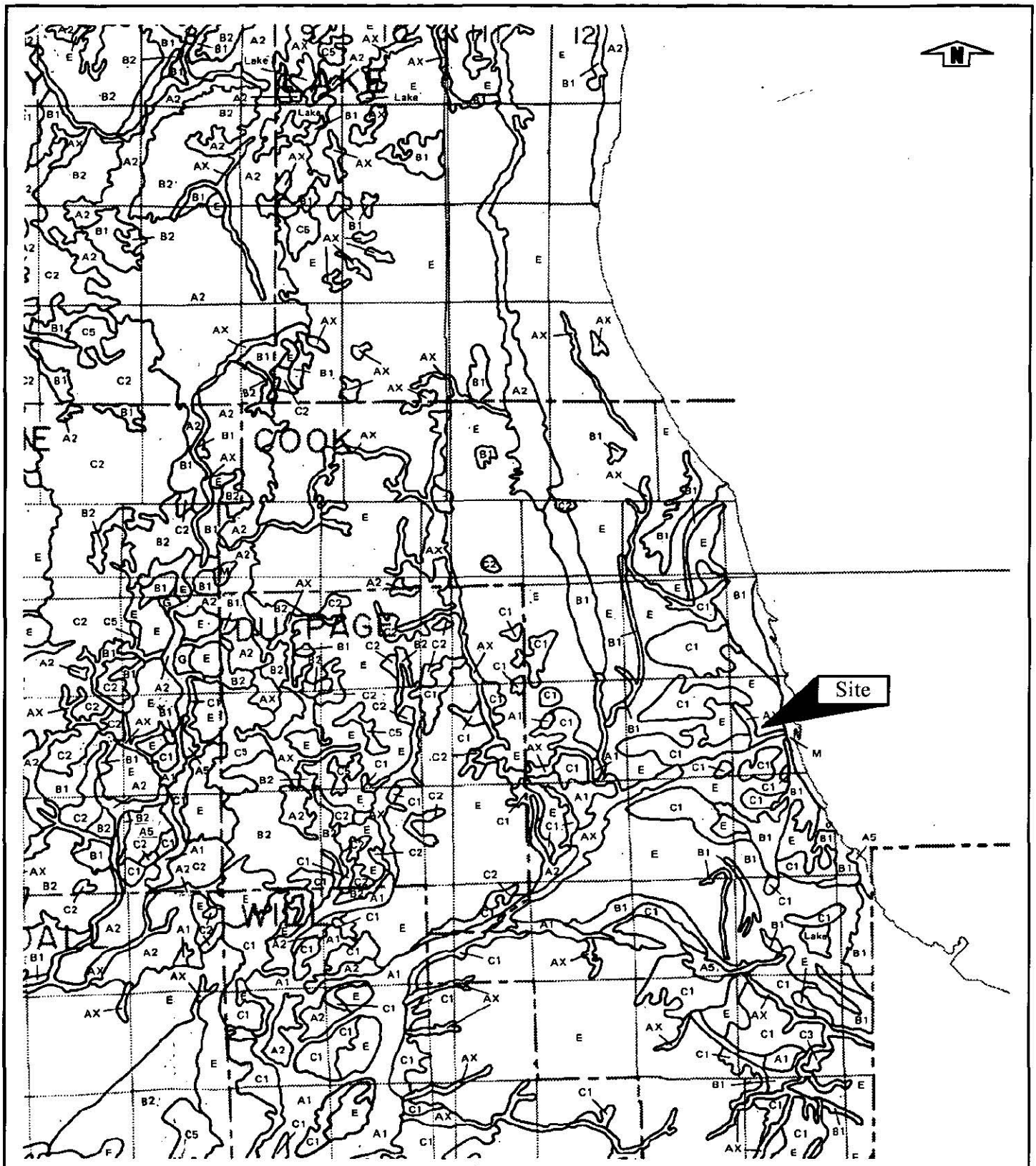
PIONEER ENVIRONMENTAL, INC.

900 W. 18th Street
Chicago, Illinois
T39N, R14E, SEC. 20

ISGS MAP
Stack-Unit Map of Northern Illinois
Scale: 1:250,000
1987

KEY: (f) I
DESCRIPTION: Discontinuous Equality Fm., Carmi Mbr. < 6m (19.7') thick, overlying Wedron Fm, silty and clayey diamictons > 6m (19.7') in thickness

Project Number: 00868C



PIONEER ENVIRONMENTAL, INC.

900 W. 18th Street
Chicago, Illinois
T39N, R14E, SEC. 20

ISGS Circular 532 Map
Potential for Contamination of Shallow Aquifers
Scale: 1:500,000
1984

KEY: E
DESCRIPTION: Uniform, relatively impermeable silty, clayey till at least 50 ft thick; no evidence of interbedded sand/gravel.

Project Number: 00868C

APPENDIX B

DRM-1 FORM, DRM-2 FORM & SITE BASE MAP

Illinois Environmental Protection Agency
Bureau of Land
Remedial Project Management Section
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

FOR ILLINOIS EPA USE:
LOG NO. _____

- $500 Advance Partial Payment Included
- DRM-2 SRP Form Included
- DRM-3 Request for Assessment Included
- DRM-4 Tax Credit Budget Plan Included

Site Remediation Program Application and Services Agreement (DRM- 1) Form

I. Site Identification:

Site Name: **900 West 18th Street**
Street Address: **900 West 18th Street**
City: **Chicago** ZIP Code: _____
County: **Cook** Approximate Size of Site (Acres): **4.7**
Illinois Inventory I. D. Number: _____ U.S. EPA I.D. Number : _____
Site Base Map Attached ☑ Illinois EPA Permit(s): _____
LUST/IEMA Incident Number(s), if applicable: _____

II. Remediation Applicant ("RA"):

RA's Name: **David Henriksen** Title: Counsel to Retirement Program
Company: **The Retirement Program of Farley, Inc. c/o Liam Ventures, Inc.**
Street Address: **233 South Wacker Drive, Suite 2150**
City: **Chicago** State: **IL** ZIP Code: **60606**
Phone: **312.993.1705** FEIN or SSN: 36- 3918311

I hereby certify that I am authorized to sign this application and services agreement. I certify that the proposed project meets the eligibility criteria set forth in Section 58.1(a)(2) of the Environmental Protection Act (415 ILCS 5/58.1(a)(2)) and regulations promulgated thereunder and that this submittal and all attachments were prepared at my direction. In consideration for the Illinois EPA's agreement to provide (subject to applicable law, available resources, and receipt of the advance partial payment) review and evaluation services for activities carried out pursuant to Title 17 of the Illinois Environmental Protection Act (415 ILCS 5/58-58.12), I agree to:

(1) Conform with the procedures of Title 17 of the Illinois Environmental Protection Act (415 ILCS 5/58 - 58.12) and implementing regulations;
(2) Allow for or otherwise arrange site visits or other site evaluations by the Illinois EPA when requested;
(3) To pay any reasonable costs incurred and documented by the Illinois EPA in providing such services*; and
(4) Make an advance partial payment to the Illinois EPA for such anticipated services provided in Section V of this application.

As the Remediation Applicant, I understand that I may terminate this services agreement at any time, by notifying the Illinois EPA in writing that services previously requested under the services agreement are no longer wanted. Within 180 days after receipt of the notice, the Illinois EPA shall provide me with a final invoice for services provided until the date of receipt of such notification.

To the best of my knowledge and belief, this request and all attachments are true, accurate and complete. I hereby certify that I have the authority to enter into this agreement.

RA's Signature: David Henriksen Date: 8-27-01

***In addition to the fees applicable under this Services Agreement, the recipient of a No Further Remediation Letter must pay to the Illinois EPA a No Further Remediation Assessment in the amount of the lesser of $2500 or an amount equal to the costs incurred by the Illinois EPA under this Agreement (35 IAC 740.615).**

III. Project Objectives:

A. Release Letter Requested.

Please complete one of the subsections by checking applicable boxes and including other information (if necessary, additional information may be attached to this application form):

☐ Comprehensive No Further Remediation ("NFR") Letter

☑ Focused NFR Letter

Identify the focused contaminants of concern by checking the applicable box(es):

☑ Volatiles ☐ BTEX ☐ PCBs ☑ Metals
☑ Semivolatiles ☑ PNAs ☐ Pesticides

Other (identify): _____

☐ 4(y) Letter

Identify the focused contaminants of concern by checking the applicable box(es):

☐ Volatiles ☐ BTEX ☐ PCBs ☐ Metals
☐ Semivolatiles ☐ PNAs ☐ Pesticides

Other (identify): _____

Identify the media of concern by checking applicable boxes:

☐ Soil ☐ Sediments Other: _____

Identify the actions (e.g., drum removal, spill response, etc.):

B. Identify any support services being sought from the Illinois EPA in addition to the review and evaluation services (if necessary, additional information may be attached to this application form):

☑ No additional support services are being sought
☐ Assistance with community relations
☐ Environmental Remediation Tax Credit Budget Review (Attach DRM-4 application)
☐ Sample collection and analyses

Other (identify): _____

C. Anticipated Schedule

SRP Document	Projected Date of Receipt by Illinois EPA
Site Investigation Report	8-30-2001
Remediation Objectives Report	8-30-2001
Remedial Action Plan	10-2001
Remedial Action Completion report	2-2002

D. Identify the current and post-remediation uses of the remediation site (if necessary, additional information may be attached to this application form):

Current Use:
Industrial

Post-Remediation Use:
Residential

IV. Written Permission from the Property Owner (check one of the applicable boxes and provide additional information):

☑ RA is the property owner of the remediation site identified in Section I of this application.

☐ RA is not the property owner of the remediation site identified in Section I of this application.

Property Owner's Name: _____

Title: _____

Company: _____

Street Address: _____

City: _____ State: _____ ZIP Code: _____ Phone: _____

I hereby certify that the Remediation Applicant has my permission to enroll the site identified in Section I of this application into the Illinois EPA Site Remediation Program. I certify that the Remediation Applicant and designated representatives have permission to enter upon the indicated premises for the purpose of conducting remedial investigations or activities.

Owner's Signature: _____ Date: _____

For multiple property owners, attach additional sheets containing all the information above along with a signed, dated certification for each.

V. Advance Partial Payment:

The Remediation Applicant shall select one of the following advance partial payment plans:

☑ Plan 1: A $500 advance partial payment is included with this application. Please make the check payable to: "Treasurer, State of Illinois". Please include "For Deposit in the Hazardous Waste Fund" and the Remediation Applicant's FEIN or SSN on the check; or

☐ Plan 2: Request that the Illinois EPA determine the appropriate partial payment (i.e., approximately one-half of the total anticipated costs of the Illinois EPA, not to exceed $5,000). A completed DRM-3 form ("Request for Assessment of Advance Partial Payment for Anticipated Services") must accompany this application so that the Illinois EPA may determine the appropriate advance partial payment specific to the services requested.

NOTE: Illinois EPA cannot refund payments without a legislative appropriation. Payment under Plan 1 accelerates the review process but increases the risk of forfeiting the payment if the applicant is ineligible. Payment under Plan 2 may result in a larger advance partial payment when a final determination is made on the application, but it reduces the risk of forfeiture.

L. If this application contains plans and reports for review and evaluation by the Illinois EPA, a completed Form DRM-2 must also accompany this submittal.

Illinois Environmental Protection Agency
Bureau of Land
Remedial Project Management Section
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

FOR ILLINOIS EPA USE:
LOG NO. _____

Site Remediation Program Form (DRM-2)
(To Be Submitted with all Plans and Reports)

I. Site Identification:

Site Name: **900 West 18th Street**
Street Address: **900 West 18th Street**
City: **Chicago** Illinois Inventory I. D. Number: _____
IEMA Incident Number: _____

II. Remediation Applicant:

Applicant's Name: **David Henriksen** Company: **The Retirement Program of Farley**
Street Address: **233 South Wacker Drive, Suite 2150**
City: **Chicago** State: **IL** ZIP Code: **60606** Phone: **312.993.1705**

I hereby request that the Illinois EPA review and evaluate the attached project documents in accordance with the terms and conditions of the Environmental Protection Act (415 ILCS 5), implementing regulations, and the review and evaluation services agreement.

Remediation Applicant's Signature: David Henriksen Date: 8-27-01

III. Contact Person:

Contact's Name: **Charity Simpson** Company: **Pioneer Environmental, Inc.**
Street Address: **1000 N. Halsted Street, Suite 202**
City: **Chicago** State: **IL** ZIP Code: **60622** Phone: **312.587.1021**

IV. Review & Evaluation Licensed Professional Engineer ("RELPE"), if applicable:

RELPE's Name: _____ Company: _____
Street Address: _____
City: _____ State: _____ ZIP Code: _____ Phone: _____

Registration Number: _____ License Expiration Date: _____

All information submitted is available to the public except when specifically designated by the Remediation Applicant to be treated confidentially as a trade secret or secret process in accordance with the Illinois Compiled Statutes, Section 7(a) of the Environmental Protection Act, applicable Rules and Regulations of the Illinois Pollution Control Board and applicable Illinois EPA rules and guidelines. The Illinois EPA is authorized to require this information under Sections 415 ILCS 5/58 - 58.12 of the Environmental Protection Act and regulations promulgated thereunder. Disclosure of this information is required as a condition of participation in the Site Remediation Program. Failure to do so may prevent this form from being processed and could result in your plan(s) or report(s) being rejected. This form has been approved by the Forms Management Center.

V. Project Documents Being Submitted:

Document Title: SIR-Focused & ROR Date of Preparation of Plan or Report: 8-27-2001

Prepared by: Pioneer Environmental Prepared for: The Retirement Prgm of Farley

Type of Document Submitted:

- ☐ Site Investigation Report - Comprehensive
- ☑ Site Investigation Report - Focused
- ☑ Remediation Objectives Report-Tier 1or 2
- ☐ Remediation Objectives Report-Tier 3
- ☐ Remedial Action Plan
- ☐ Remedial Action Completion Report
- ☐ Sampling Plan
- ☐ Health and Safety Plan
- ☐ Community Relations Plan
- ☐ Risk Assessment
- ☐ Contaminant Fate & Transport Modeling
- ☐ Environmental Remediation Tax Credit - Budget Plan Review
- Other: _____

Document Title: _____ Date of Preparation of Plan or Report: _____

Prepared by: _____ Prepared for: _____

Type of Document Submitted:

- ☐ Site Investigation Report - Comprehensive
- ☐ Site Investigation Report - Focused
- ☐ Remediation Objectives Report-Tier 1or 2
- ☐ Remediation Objectives Report-Tier 3
- ☐ Remedial Action Plan
- ☐ Remedial Action Completion Report
- ☐ Sampling Plan
- ☐ Health and Safety Plan
- ☐ Community Relations Plan
- ☐ Risk Assessment
- ☐ Contaminant Fate & Transport Modeling
- ☐ Environmental Remediation Tax Credit - Budget Plan Review
- Other: _____

Document Title: _____ Date of Preparation of Plan or Report: _____

Prepared by: _____ Prepared for: _____

Type of Document Submitted:

- ☐ Site Investigation Report - Comprehensive
- ☐ Site Investigation Report - Focused
- ☐ Remediation Objectives Report-Tier 1or 2
- ☐ Remediation Objectives Report-Tier 3
- ☐ Remedial Action Plan
- ☐ Remedial Action Completion Report
- ☐ Sampling Plan
- ☐ Health and Safety Plan
- ☐ Community Relations Plan
- ☐ Risk Assessment
- ☐ Contaminant Fate & Transport Modeling
- ☐ Environmental Remediation Tax Credit - Budget Plan Review
- Other: _____

VI. Professional Engineer's Seal or Stamp:

I attest that all site investigations or remedial activities that are the subject of this plan(s) or report(s) were performed under my direction, and this document and all attachments were prepared under my direction or reviewed by me, and to the best of my knowledge and belief, the work described in the plan and report has been designed or completed in accordance with the Illinois Environmental Protection Act (415 ILCS 5), 35 Ill. Adm. Code 740, and generally accepted engineering practices, and the information presented is accurate and complete.

Engineer Name: Charity Simpson, P.E.

Company: Pioneer Environmen Phone: 312.587.1021

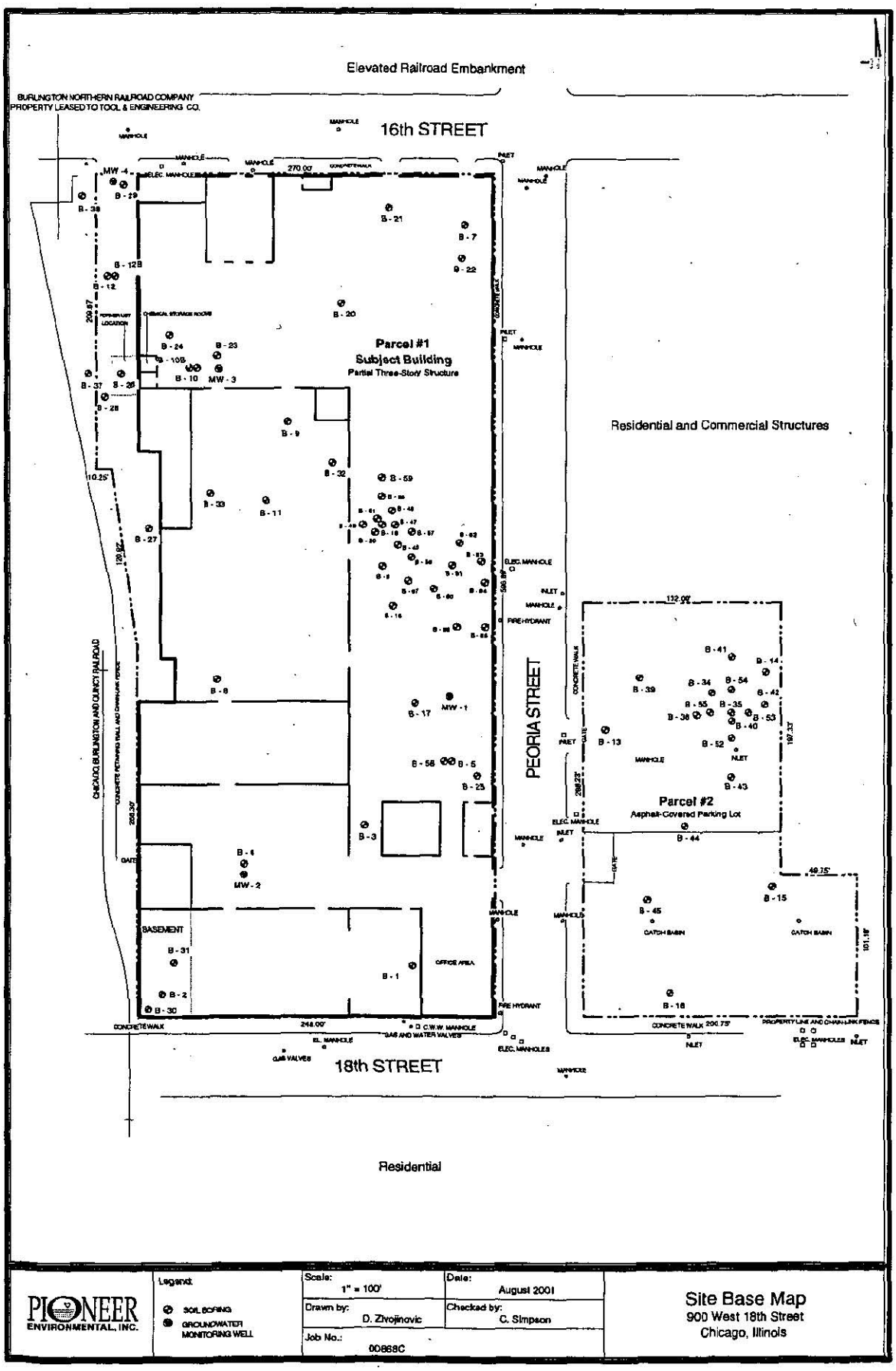
Registration Number: 062-054576

Signature: _____ License Expiration Date: 11-30-01

Professional Engineer's Seal or Stamp:

CHARITY A. SIMPSON
062-054576
REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

Site Base Map



APPENDIX C

SOIL AND GROUNDWATER SAMPLING PROTOCOLS

PROTOCOL FOR SUBSURFACE SOIL SAMPLING

Subsurface samples are collected by employing various soil boring techniques based on certain site specific conditions. Soil borings are performed using a Hollow or Solid Stem (site specific) auger with split-spoon sampling techniques, a hydraulic percussive split-spoon sampler, a percussive Macro-Core® barrel sampler, and/or a stainless steel hand auger. The soil sampling activities are conducted in accordance with American Society of Testing and Materials (ASTM) standards (ASTM:D 1586). Soil samples are collected with a stainless steel hand auger, a split-spoon sampler, and/or a Macro-Core® sampler at 2-3 foot intervals depending on the specific method used. In the split-spoon sampling procedures, a split-barrel sampler having either a 2-inch or 1-3/16 inch outside diameter, an inside diameter of 1-3/8 or 7/8 inches, and a length of 2.5 or 3 feet is driven into the soil to collect a representative and undisturbed sample. In the Macro-Core® barrel sampling technique, a stainless steel barrel having a 2-inch outside diameter, an inside diameter of 1-1/2 inches, and a length of 2 or 3 feet is fitted with a PVC liner and is driven into the soil to collect a representative and undisturbed sample.

The drilling is directed by a Pioneer Environmental Field Project Geologist/Engineer, who logs geologic materials encountered during drilling, field screens auger cuttings and soil samples, observes the drilling activities, and supervises sample collection. Each sample is examined in the field for odor and visual evidence of hydrocarbon or other organic contamination. The field observations are noted in the soil boring logs that are included in the Appendices.

A representative portion of each sample is placed into an unused, air-tight plastic bag which is sealed and dedicated to that discrete sample. The sample is allowed to achieve a constant temperature and the headspace above each sample is screened for volatile organic compounds (VOCs) using either a Photovac MP-1000 handheld air monitor / photoionization detector (PID) or a Photovac IS 3000 handheld air monitor / flame ionization detector (FID), depending on the nature of the targeted contaminants. The PID/FID are devices that are sensitive to a variety of VOCs. The headspace is screened by inserting the PID/FID probe into the space above the soil and recording the maximum reading of the instrument. The results of the headspace screening are also listed on the soil boring logs.

When soil samples will be laboratory tested for VOCs, one of two field sampling methods are used as required by US EPA's SW-846 Method 5035. 1) A representative portion of the sample collected in the field is placed in an EnCore™ sampler, or equivalent, immediately after collection, with the appropriate quantity and volume of the containers determined by the scope of work and field conditions. The EnCore™ samplers, or equivalent, are delivered to the laboratory within 48 hours of sample collection. 2) An appropriate weight of a representative portion of the sample collected in the field is placed in laboratory-provided glassware, immediately after collection, and then the appropriate preservative is added, either sodium bisulfate-for samples with estimated VOC concentrations less than 200 ppb; or methanol-for samples with estimated VOC concentrations greater than 200 ppb.

Any soil samples chosen for analysis are packed in appropriate containers, properly labeled, and shipped in a cooler on ice via a delivery service overnight to an independent laboratory under standard chain-of-custody procedures. Samples are selected based on the scope of work, field observations (i.e. visual/odor observations, elevated PID readings, etc.), other site specific conditions, and the judgment of the Pioneer Field Project Geologist/Engineer.

Drill cuttings and liquids generated are left at the borehole. All boreholes are decommissioned in accordance with applicable Illinois Department of Public Health guidelines. When required, these spoils are contained in 55 gallon Type 17H drums. Decontamination procedures for the drilling equipment consists of steam cleaning the augers after each boring using a biodegradable detergent and high-pressure steam rinse. The split-spoon samplers are decontaminated between each sample interval by washing in a solution of Alconox and water, and triple rinsing with clean heated water.

Any deviations to or modifications of this standard protocol will be described on a site by site basis.

PROTOCOL
GROUNDWATER MONITORING WELL INSTALLATION & SAMPLING

Groundwater monitoring wells are typically installed using hollow stem auger borings. When spatial constraints dictate, wells may be installed using manual hand-augering techniques, or other acceptable practices. Soil sampling is conducted during well installation, according to Pioneer's Subsurface Soil Sampling Protocol. The drilling and well installation are directed by Pioneer's Field Project Geologist/Engineer, who logs geologic materials encountered during drilling, field screens auger cuttings and soil samples, observes the drilling activities, and supervises installation of groundwater monitoring wells. All drilling equipment and tools are properly decontaminated (i.e. pressure washing, steam cleaning, etc.) prior to mobilization onto the site, between boreholes, and upon completion of the drilling program.

Wells are constructed of 2 inch I.D. schedule 40 flush-joint PVC riser and screen unless noted otherwise in the report. The well materials are decontaminated prior to installation. When the depth of the well allows, the annular space surrounding the screen is backfilled with silica sand filter pack to a height not less than 1 foot above the top of the well screen, and a minimum of one foot of bentonite pellets or granular bentonite is placed above this backfill, to provide a low permeability seal. The remaining annulus is sealed with a cement/bentonite grout to the ground surface. Well screens are positioned to monitor selected areas of the water column. In high traffic areas, a flush-mount protective casing with a locking well cap is generally installed at the surface and secured with concrete. In low traffic areas, a "stickup" locking protective casing is typically installed.

After installation, wells are developed using either a new disposable high-density polyethylene (HDPE) bailer for each well, or a stainless steel submersible pump, by purging approximately 5-10 well volumes of water from each well, until the well water is visually clear of suspended sediments, or until further yield cannot be achieved. Wells are allowed to stabilize prior to sampling, to ensure the collected sample is representative of groundwater at the location. If a stainless steel pump is used during well development, it is decontaminated between wells using a tri-sodium phosphate (TSP) wash and triple water rinse.

Prior to sample collection, the wells are purged by removing a maximum of 3-5 well volumes of water or until further yield cannot be achieved in order to remove all static water from the wells. Purging is accomplished using either a disposable HDPE bailer which is dedicated to the individual well or a stainless steel submersible pump. Sample collection is accomplished using a new disposable HDPE bailer for each well. Groundwater samples are collected, placed in appropriately sized laboratory provided glassware and labeled, identifying sample number, location and date, and sampling personnel. The proper sample preservatives are added to the sampling jars as required. Standard chain-of-custody procedures are followed regarding shipment and receipt of samples.

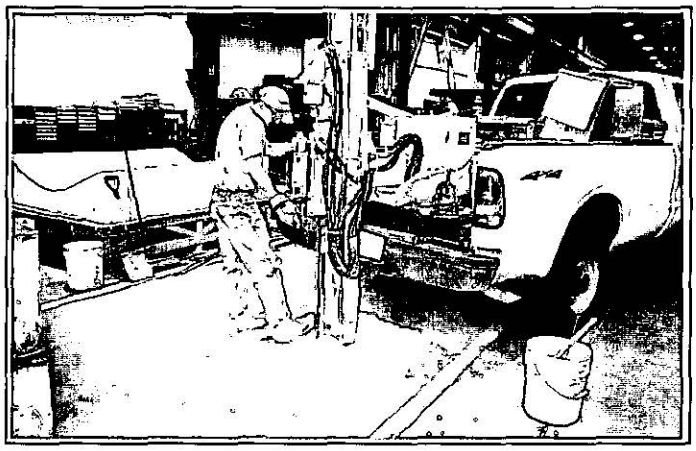
Quality Assurance/Quality Control (QA/QC) procedures for field sampling techniques are performed on a site-by-site basis per scope of work considerations and contract obligations.

In accordance with Pioneer's Site Safety Plan, a photoionization detector (PID) is used to monitor ambient air concentrations at the sampling locations. Personal protective equipment is utilized by site personnel during performance of sampling activities, as specified in the Site Safety Plan as necessary.

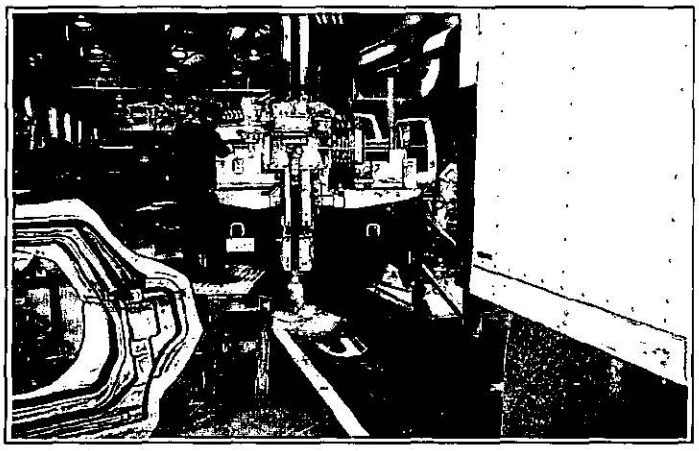
Any deviations to or modifications of this standard protocol will be described on a site-by-site basis.

APPENDIX D

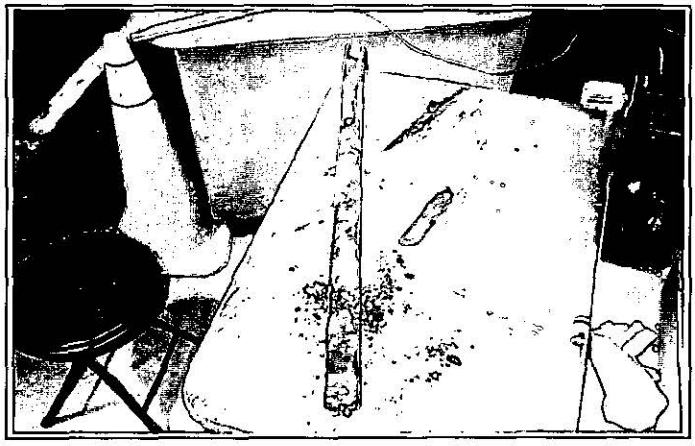
PHOTOGRAPHIC LOG



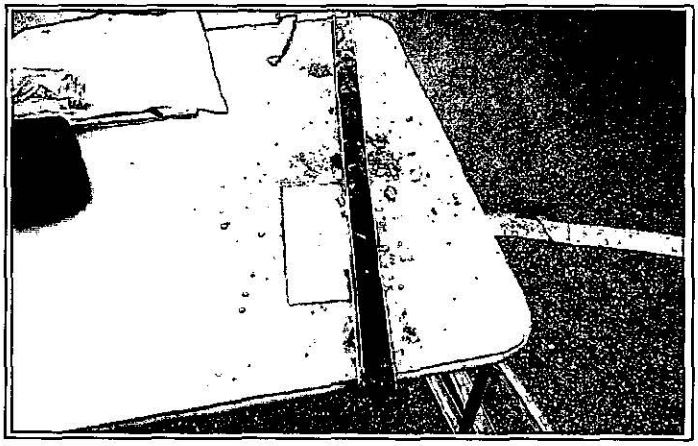
View of typical soil boring being advanced



View of Monitoring Well being drilled



View of typical soil sample (fill)



View of typical soil sample

PIONEER ENVIRONMENTAL, INC.	900 West 18th Street Chicago, Illinois	PHOTOGRAPHIC LOG Project Number: 00868C

APPENDIX E

SOIL BORING LOGS/MONITORING WELL COMPLETION LOGS

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-1

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 12/21/2000

Date End: 12/21/2000

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		CONCRETE	
<1	50%			Fill		Crushed limestone FILL Loose, Dry	No visual No odor
			3			Refusal at 3 feet	
			6				
			9				
			12				
			15				
			18				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig:	SIMCO EarthProbe 200
Driller:	Predrag Vrhovac
Geologist:	Charity Simpson
LUST Incident No:	NA

Water Depth While Drilling:- Water Depth After Drilling: NA

Project Number: 00868B

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-2

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 12/21/2000

Date End: 12/21/2000

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		CONCRETE	
<1	100%			Fill		Black cinders and sand Loose, Moist	No visual No odor
46	100%		3	Fill		Gray crushed limestone *FILL* Loose, Wet	
						Boring terminated at 4 feet	
			6				
			9				
			12				
			15				
			18				

Completion Notes:
Hatched pattern denotes sample analyzed.
Boring located in basement.

Drill Rig: Hand Geoprobe

Driller: J. Mizwicki

Geologist: Charity Simpson

LUST Incident No: NA

Water Depth While Drilling:- Water Depth After Drilling: NA

Project Number: 00868B

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-3

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 12/21/2000

Date End: 12/21/2000

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		CONCRETE	
-	0%					No recovery	
			3				
5	60%			Fill		Crushed limestone FILL Loose, Moist	
			6				No visual No odor
45	90%			SM		Tan well-sorted fine-grained silty SAND Dense, Wet Medium dense, Wet at 9'-10.5'	
			9				
20	90%			CL		Gray silty CLAY with some fine-grained SAND Medium firm, Wet	
			12			Boring terminated at 12 feet	
			15				
			18				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig:	SIMCO EarthProbe 200
Driller:	Predrag Vrhovac
Geologist:	Charity Simpson
LUST Incident No:	NA

Water Depth While Drilling: 6' Water Depth After Drilling: NA

Project Number: 00868B

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-4

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 12/21/2000

Date End: 12/21/2000

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		CONCRETE	No visual No odor
-	0%					No recovery	
			3				
<1	80%			Fill		Black silty Sand and Gravel Loose, Moist	
			6				
102	80%			SM		Tan well-sorted fine-grained silty SAND Medium dense, Damp	
			9				
125	90%						
				CL		Gray silty CLAY with trace fine-grained SAND Firm, Damp	
			12			Boring terminated at 12 feet	
			15				
			18				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig: SIMCO EarthProbe 200

Driller: Predrag Vrhovac

Geologist: Charity Simpson

LUST Incident No: NA

Water Depth While Drilling:- Water Depth After Drilling: NA

Project Number: 00868B

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-5

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 12/21/2000

Date End: 12/21/2000

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		CONCRETE	
-	0%					No recovery	
			3				No visual No odor
8	50%			Fill		Black fine-grained silty sand with bricks and gravel Loose, Dry to moist	
			6				
313	50%			CL		Black silty CLAY with some gravel, disturbed Soft, Wet	No visual Strong odor
			9				
30	90%					Gray silty CLAY with trace fine-grained SAND Firm, Damp	
			12	CL			No visual No odor
12	90%						
			15			Boring terminated at 15 feet	
			18				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig: SIMCO EarthProbe 200

Driller: Predrag Vrhovac

Geologist: Charity Simpson

LUST Incident No: NA

Water Depth While Drilling: 6' Water Depth After Drilling: NA

Project Number: 00868B

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-6

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 12/21/2000

Date End: 12/21/2000

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		CONCRETE	
81	50%		3	Fill		Dark brown well-sorted fine-grained silty sand with bricks and gravel Loose, Moist	
226	30%		6				No visual No odor
55	20%		9			Boring terminated at 9 feet	
			12				
			15				
			18				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig: SIMCO EarthProbe 200

Driller: Predrag Vrhovac

Geologist: Charity Simpson

LUST Incident No: NA

Water Depth While Drilling:- Water Depth After Drilling: NA

Project Number: 00868B

PIONEER ENVIRONMENTAL, INC.

Boring Log

Site: 900 West 18th Street, Chicago, Illinois

Boring No.: B-7

Date Begin: 12/22/2000

Date End: 12/22/2000

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		CONCRETE	
-	0%					No recovery	
			3				
208	50%			Fill		Crushed limestone, bricks, sand and gravel Dense, Moist	No visual Petroleum odor
			6	SW		Black well-sorted fine-grained SAND Dense, Damp	
890	60%			Fill		Crushed limestone Loose, Wet	Petroleum odor
			9	SM		Gray well-sorted fine-grained silty SAND Wet	
759	50%						
10			12	CL		Brown and gray silty CLAY Stiff, Moist	Slight odor No visual No odor
16	90%						
			15			Boring terminated at 15 feet	
			18				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig:	SIMCO EarthProbe 200
Driller:	Predrag Vrhovac
Geologist:	Charity Simpson
LUST Incident No:	NA

Water Depth While Drilling:7' Water Depth After Drilling: NA

Project Number: 00868B

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-8

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 12/22/2000

Date End: 12/22/2000

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		CONCRETE	
<1	60%		3	Fill		Crushed limestone FILL Dense, Slight Moist at 1'-6' Dense, Wet at 6'-7.5'	No visual No odor
34	40%						
109	30%		6				
						Refusal at 7.5 feet	
			9				
			12				
			15				
			18				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig: SIMCO EarthProbe 200

Driller: Predrag Vrhovac

Geologist: Charity Simpson

LUST Incident No: NA

Water Depth While Drilling: 6' Water Depth After Drilling: NA

Project Number: 00868B

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-9

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 12/22/2000

Date End: 12/22/2000

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		CONCRETE	
-	0%					No recovery	
			3				
<1	60%			Fill		Tan and black sand, bricks and gravel Dense, Slighty moist	No visual No odor
			6				
1620	50%			SM		Dark gray to black well-sorted fine-grained silty SAND Medium dense, Damp	No visual Slight odor
			9				
1420	90%			CL		Brown and gray silty CLAY Firm, Moist	No visual Slight odor
			12			Boring terminated at 12 feet	
			15				
			18				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig: SIMCO EarthProbe 200

Driller: Predrag Vrhovac

Geologist: Charity Simpson

LUST Incident No: NA

Water Depth While Drilling:- Water Depth After Drilling: NA

Project Number: 00868B

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-10

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 12/22/2000

Date End: 12/22/2000

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		CONCRETE	
<1	20%		3	Fill		Crushed limestone FILL Dense, Moist	No visual No odor
13	50%		6				
2651	90%		9	Fill		Tan and black sand, bricks and gravel Loose, Moist	No visual Strong odor
330	90%		12	SM		Black well-sorted fine-grained silty SAND Medium dense, Damp	No visual Slight odor
				CL		Gray silty CLAY Firm, Moist	
			15			Boring terminated at 12 feet	
			18				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig: SIMCO EarthProbe 200

Driller: Predrag Vrhovac

Geologist: Charity Simpson

LUST Incident No: NA

Water Depth While Drilling: 9' Water Depth After Drilling: NA

Project Number: 00868B

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-11

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 12/22/2000

Date End: 12/22/2000

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		CONCRETE	
-	0%					No recovery	
			3				
44	50%			Fill		Black sand, bricks, gravel and crushed limestone Loose, Moist	
			6				No visual No odor
2946	50%			SM		Black to tan well-sorted *fine-grained silty* SAND Medium dense, Damp	
			9				
31	50%			SM		Tan well-sorted fine-grained silty SAND *Loose, Wet*	
			12				
						Boring terminated at 12 feet	
			15				
			18				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig:	SIMCO EarthProbe 200
Driller:	Predrag Vrhovac
Geologist:	Charity Simpson
LUST Incident No:	NA

Water Depth While Drilling: 9' Water Depth After Drilling: NA

Project Number: 00868B

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-12

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 12/22/2000

Date End: 12/22/2000

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		CONCRETE	No visual No odor
<1	50%			Fill		Crushed limestone	
			3				
283	50%			SM		Black well-sorted fine-grained silty SAND Loose, Wet	
			6				
330	50%			SM		Tan well-sorted fine-grained silty SAND Loose, Wet	
			9				
14	90%			CL		Brown and gray silty CLAY with trace fine-grained sand Firm, Moist Boring terminated at 12 feet	
			12				
			15				
			18				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig:	SIMCO EarthProbe 200
Driller:	Predrag Vrhovac
Geologist:	Charity Simpson
LUST Incident No:	NA

Water Depth While Drilling: 5' Water Depth After Drilling: NA

Project Number: 00868B

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-13

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 12/22/2000

Date End: 12/22/2000

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Asphalt		ASPHALT	
-	0%					No recovery	
			3				
11	60%			SM		Black well-sorted fine-grained silty SAND with trace gravel Medium dense, Moist	No visual No odor
			6				
4	50%						
			9				
				SM		Tan well-sorted fine-grained silty SAND Medium dense, Wet	
3	60%						
			12				
						Boring terminated at 12 feet	
			15				
			18				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig:	SIMCO EarthProbe 200
Driller:	Predrag Vrhovac
Geologist:	Charity Simpson
LUST Incident No:	NA

Water Depth While Drilling: 8' Water Depth After Drilling: NA

Project Number: 00868B

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-14

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 12/22/2000

Date End: 12/22/2000

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Asphalt		ASPHALT	
-	0%					No recovery	
			3	Fill		Crushed limestone Loose, Moist	No visual No odor
<1	60%			SM		Tan well-sorted fine-grained silty SAND Loose, Moist	
			6			Auger refusal at 6 feet	
			9				
			12				
			15				
			18				

Completion Notes:

Drill Rig:	SIMCO EarthProbe 200
Driller:	Predrag Vrhovac
Geologist:	Charity Simpson
LUST Incident No:	NA

Water Depth While Drilling:- Water Depth After Drilling: NA

Project Number: 00868B

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-15

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 12/22/2000

Date End: 12/22/2000

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Asphalt		ASPHALT	
-	0%					No recovery	
			3				
<1	50%			SM		Black well-sorted fine-grained silty SAND with trace gravel Medium dense, Moist	
			6				No visual No odor
<1	50%						
			9	SM		Tan well-sorted fine-grained silty SAND Medium dense, Wet	
<1	90%			CL		Gray silty CLAY with some fine-grained sand Soft, Wet	
			12			Boring terminated at 12 feet	
			15				
			18				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig:	SIMCO EarthProbe 200
Driller:	Predrag Vrhovac
Geologist:	Charity Simpson
LUST Incident No:	NA

Water Depth While Drilling: 8' Water Depth After Drilling: NA

Project Number: 00868B

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-16

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 12/22/2000

Date End: 12/22/2000

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Asphalt		ASPHALT	
-	0%					No recovery	
			3				
<1	70%			SM		Black well-sorted fine-grained silty SAND with some glass and cinders Medium dense, Damp	No visual No odor
			6				
<1	50%					Tan well-sorted fine-grained silty SAND Medium dense, Wet	
			9	SM			
<1	50%						
			12			Boring terminated at 12 feet	
			15				
			18				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig:	SIMCO EarthProbe 200
Driller:	Predrag Vrhovac
Geologist:	Charity Simpson
LUST Incident No:	NA

Water Depth While Drilling: 7' Water Depth After Drilling: NA

Project Number: 00868B

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-17

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 03/08/2001

Date End: 03/08/2001

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		Concrete	
3	50%			Fill		Crushed limestone FILL Loose, Moist	
			3				
1	100%			SM		Brown silty SAND Loose, Moist	
			6				
4	100%			OL		Brown clayey SILT Soft, Moist	
			9			Boring terminated at 9 feet	
			12				
			15				
			18				

Completion Notes:
Hatched patterns denote sample analyzed.

Drill Rig:	SIMCO EarthProbe 200
Driller:	Predrag Vrhovac
Geologist:	C. Simpson
LUST Incident No:	NA

Water Depth While Drilling: 6.5' Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-18

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 03/08/2001

Date End: 03/08/2001

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		Concrete	
14	90%			Fill		Crushed limestone FILL Loose, Moist	
			3				
				Fill		Crushed limestone Fill and black to medium-tan sand Loose, Moist	No visual No odor
18	90%		6				
36	40%		9	SW		Black well-sorted medium-grained SAND with woods fragments Dense, Wet	Slight odor
				SW		Tan well-sorted medium-grained SAND Dense, Wet	
15	50%			CL		Brown and gray silty CLAY with trace fine-grained sand Firm, Moist	No visual No odor
			12			Boring terminated at 12 feet	
			15				
			18				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig:	SIMCO EarthProbe 200
Driller:	Predrag Vrhovac
Geologist:	C. Simpson
LUST Incident No:	NA

Water Depth While Drilling: 9' Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-19

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 03/08/2001

Date End: 03/08/2001

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		Concrete	
12	90%			Fill		Crushed limestone FILL Loose, Moist	No visual No odor
			3				
17	90%			Fill		Black medium-coarse sand with bricks and concrete Loose, Moist	
			6	Concrete		Concrete	
						Refusal at 6.5 feet	
			9				
			12				
			15				
			18				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig: SIMCO EarthProbe 200

Driller: Predrag Vrhovac

Geologist: C. Simpson

LUST Incident No: NA

Water Depth While Drilling:- Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-20

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 03/08/2001

Date End: 03/08/2001

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		Concrete	
25	60%		3	Fill		Crushed limestone FILL Loose; Moist	
24	85%		6	Fill		Crushed bricks, gravel, concrete and sand	No visual No odor
26	85%		9	SM		Brown well-sorted fine to medium-grained silty SAND Dense, Wet	
				CL		Brown medium-grained sandy CLAY Firm, Moist	
26	85%		12	CL		Gray silty CLAY with some medium-grained sand Soft, Wet	
						Boring terminated at 12 feet	
			15				
			18				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig:	SIMCO EarthProbe 200
Driller:	Predrag Vrhovac
Geologist:	C. Simpson
LUST Incident No:	NA

Water Depth While Drilling: 7' Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-21

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 03/08/2001

Date End: 03/08/2001

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		Concrete	
26	60%			Fill		Crushed limestone FILL Loose, Moist	
			3			Crushed bricks, gravel and sand FILL Loose, Moist	No visual No odor
26	85%			Fill			
			6				
38	85%			SW		Black well-sorted medium-grained SAND Dense, Damp	Slight odor
			9	CL		Brown well-sorted medium-grained silty CLAY Dense, Damp to wet	
27	85%			CL		Brown and gray silty CLAY Stiff, Moist	No visual No odor
			12			Boring terminated at 12 feet	
			15				
			18				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig: SIMCO EarthProbe 200

Driller: Predrag Vrhovac

Geologist: C. Simpson

LUST Incident No: NA

Water Depth While Drilling:- Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-22

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 03/08/2001

Date End: 03/08/2001

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		Concrete	
7	70%		3	Fill		Crushed limestone FILL Loose, Moist	No visual No odor
11	70%		6	Fill SW		Crushed bricks and sand FILL Loose, Moist Tan and black well-sorted medium-grained SAND Dense, Moist	No visual Slight odor
20	90%		9	SM		Dark gray well-sorted medium-grained silty SAND Dense, Wet	No visual Slight odor
12	90%		12	CL		Brown and gray silty CLAY Firm, Moist	No visual No odor
			15			Boring terminated at 12 feet	
			18				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig:	SIMCO EarthProbe 200
Driller:	Predrag Vrhovac
Geologist:	C. Simpson
LUST Incident No:	NA

Water Depth While Drilling:- Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-23

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 03/08/2001

Date End: 03/08/2001

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		Concrete	
15	80%		3	Fill		Crushed limestone FILL Loose, Moist	
14	80%		6	Fill		Black sand with gravel and cinders Dense, Moist	No visual No odor
14	90%		9	SM		Tan well-sorted medium-grained silty SAND Dense, Damp to wet	
19	90%		12	CL		Gray silty CLAY with some fine-grained sand Firm, Moist	
			15			*Boring terminated at 12 feet*	
			18				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig: SIMCO EarthProbe 200

Driller: Predrag Vrhovac

Geologist: C. Simpson

LUST Incident No: NA

Water Depth While Drilling:- Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Site: 900 West 18th Street, Chicago, Illinois

Boring No.: B-24

Date Begin: 03/08/2001

Date End: 03/08/2001

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		Concrete	
14	50%		3	Fill		Crushed limestone FILL Loose, Moist	No visual No odor
14	80%		6	Fill		Black sand with gravel and cinders Dense, Moist	
48	50%		9	SM		Tan well-sorted medium-grained silty SAND Dense, Damp to wet	No visual Slight odor
10	50%		12	CL		Gray silty CLAY with some fine-grained sand Firm, Moist	No visual No odor
			15			Boring terminated at 12 feet	
			18				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig:	SIMCO EarthProbe 200
Driller:	Predrag Vrhovac
Geologist:	C. Simpson
LUST Incident No:	NA

Water Depth While Drilling:- Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-25

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 03/09/2001

Date End: 03/09/2001

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		Concrete	
28	50%		3	Fill		Crushed limestone FILL Loose, Moist	
19	70%		6				No visual No odor
22	95%		9	SP		Brown poorly-sorted fine-coarse SAND with gravel Dense, Wet	
17	95%		12	OL		Gray silty CLAY with some fine-grained sand and trace organics Soft, Wet Stiff at 11.5'-12'	
			15			Boring terminated at 12 feet	
			18				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig:	SIMCO EarthProbe 200
Driller:	Bob Tirjer
Geologist:	C. Simpson
LUST Incident No:	NA

Water Depth While Drilling:7' Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-26

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 03/09/2001

Date End: 03/09/2001

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		Concrete	
15	85%		3			Pea gravel Loose, Moist Wet at 3'-9'	
10	85%		6	GW			No visual No odor
3	90%		9			Obstruction at 9 feet	
			12				
			15				
			18				

Completion Notes:

Drill Rig: SIMCO EarthProbe 200

Driller: Bob Tirjer

Geologist: C. Simpson

LUST Incident No: NA

Water Depth While Drilling:3' Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-27

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 03/09/2001

Date End: 03/09/2001

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		Concrete	
17	70%		3	Fill		Crushed limestone FILL Loose, Moist Wet at 3-7'	
20	80%		6				No visual No odor
15	85%			Fill		Bricks, sandy clay and gravel FILL	
			9			Obstruction at 8 feet	
			12				
			15				
			18				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig:	SIMCO EarthProbe 200
Driller:	Bob Tirjer
Geologist:	C. Simpson
LUST Incident No:	NA

Water Depth While Drilling: 3' Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-28

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 03/09/2001

Date End: 03/09/2001

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		Concrete	
12	40%		3	Fill		Crushed limestone, bricks and gravel FILL Loose, Moist	No visual No odor
11	80%		6				
12	80%		9	Fill		Crushed limestone, bricks, gravel and black fine-coarse sand Loose, Wet	
			12			Boring terminated at 9 feet	
			15				
			18				

Completion Notes:

Drill Rig: SIMCO EarthProbe 200

Driller: Bob Tirjer

Geologist: C. Simpson

LUST Incident No: NA

Water Depth While Drilling: 7' Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-29

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 03/09/2001

Date End: 03/09/2001

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		Concrete	
4.6	70%		3	Fill		Crushed limestone FILL Loose, Moist	No visual No odor
12	80%			Fill		Dark gray medium-grained Sand and Gravel	
8	90%		6	CL		Gray silty CLAY with some fine-grained sand Soft, Wet Stiff at 9-10'	Sheen Slight odor
11	95%		9				
7	90%		12				No visual No odor
			15			Boring terminated at 15 feet	
			18				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig:	SIMCO EarthProbe 200
Driller:	Bob Tirjer
Geologist:	C. Simpson
LUST Incident No:	NA

Water Depth While Drilling:- Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-30

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 03/12/2001

Date End: 03/12/2001

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		Concrete	
6	80%			Fill		Crushed limestone FILL Loose, Moist	No visual No odor
6	80%		3	SW		Black and tan well-sorted fine-grained SAND Dense, Wet	
						Refusal at 4 feet	
			6				
			9				
			12				
			15				
			18				

Completion Notes:
Hatched pattern denotes sample analyzed.
Boring located in basement.

Drill Rig: Hand Geoprobe

Driller: Jim Mizwicki

Geologist: C. Simpson

LUST Incident No: NA

Water Depth While Drilling: 3' Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-31

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 03/12/2001

Date End: 03/12/2001

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		Concrete	
<1	80%			Fill		Crushed limestone FILL Loose, Moist	
				SW		Black well-sorted fine-grained SAND Dense, Moist	
<1	80%		3				No visual No odor
				CL		Gray silty CLAY with trace fine-grained sand Firm, Moist	
20	80%		6			Boring terminated at 6 feet	
			9				
			12				
			15				
			18				

Completion Notes:
Hatched pattern denotes sample analyzed.
Boring located in basement.

Drill Rig: Hand Geoprobe

Driller: Jim Mizwicki

Geologist: C. Simpson

LUST Incident No: NA

Water Depth While Drilling:- Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-32

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 03/12/2001

Date End: 03/12/2001

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		Concrete	No visual No odor
15	80%		3	Fill		Crushed limestone FILL Loose, Moist	
18	85%		6	Fill		Crushed bricks FILL Loose, Moist	
				SC		Black clayey SAND grading to black sandy CLAY Firm, Moist	
19	90%		9	SM		Brown well-sorted fine to medium-grained silty SAND Dense, Wet	
7	90%		12	CL		Brown sandy CLAY Soft, Wet	
						Boring terminated at 12 feet	
			15				
			18				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig:	SIMCO EarthProbe 200
Driller:	Bob Tirjer
Geologist:	C. Simpson
LUST Incident No:	NA

Water Depth While Drilling: 7.5' Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Site: 900 West 18th Street, Chicago, Illinois

Boring No.: B-33

Date Begin: 03/12/2001

Date End: 03/12/2001

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		Concrete	
6	80%		3	Fill		Crushed limestone FILL Loose, Damp	
10	80%			Fill		Crushed bricks FILL Loose, Moist	
15	80%		6	SC		Brown well-sorted fine-grained clayey SAND Dense, Damp to wet Wet at 6'-12'	No visual No odor
12	80%		9				
			12			Boring terminated at 12 feet	
			15				
			18				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig:	SIMCO EarthProbe 200
Driller:	Bob Tirjer
Geologist:	C. Simpson
LUST Incident No:	NA

Water Depth While Drilling: 6' Water Depth After Drilling: NA

Project Number: 00868D

Page 1

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-34

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 03/12/2001

Date End: 03/12/2001

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Asphalt		ASPHALT	
				Fill		Crushed limestone FILL Loose, Damp	
<1	85%		3	Fill		Black sand, cinders, bricks and gravel FILL Loose, Moist	
<1	90%		6	SC		Brown well-sorted fine-grained clayey SAND Dense, Damp to wet Wet at 6'-7'	
<1	95%		9	SM		Tan well-sorted fine-grained silty SAND Medium dense, Wet	No visual No odor
<1	85%		12				
<1	80%		15			Gray silty CLAY with trace fine-grained sand Firm, Moist	
<1	75%		18				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig: SIMCO EarthProbe 200

Driller: Bob Tirjer

Geologist: C. Simpson

LUST Incident No: NA

Water Depth While Drilling: 6' Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-34

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 03/12/2001

Date End: 03/12/2001

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
			21	CL			
			24				
			27				
			30			Boring terminated at 30 feet	
			33				
			36				
			39				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig: SIMCO EarthProbe 200

Driller: Bob Tirjer

Geologist: C. Simpson

LUST Incident No: NA

Water Depth While Drilling: 6' Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-35

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 03/12/2001

Date End: 03/12/2001

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Asphalt		ASPHALT overlying concrete	
				Fill		Crushed limestone FILL Loose, Moist	
<1	85%						
			3	Fill		Black sand, cinders, bricks and gravel FILL Loose, Moist	
<1	90%						No visual No odor
			6			Brown well-sorted fine-grained silty SAND Dense, Damp	
<1	90%			SM			
			9			Boring terminated at 9 feet	
			12				
			15				
			18				

Completion Notes:
Hatched patterns denote sample analyzed.

Drill Rig: SIMCO EarthProbe 200

Driller: Bob Tirjer

Geologist: C. Simpson

LUST Incident No: NA

Water Depth While Drilling:- Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-36

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 03/15/2001

Date End: 03/15/2001

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Asphalt		ASPHALT	
<1	70%			Fill		Crushed limestone FILL Loose, Moist	
			3				
<1	50%			Fill		Black sand, cinders, bricks and gravel FILL Loose, Moist	
			6				
<1	90%			SM		Tan well-sorted fine-grained silty SAND Medium dense, Wet	No visual No odor
			9				
<1	90%						
			12			Boring terminated at 12 feet	
			15				
			18				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig:	SIMCO EarthProbe 200
Driller:	Predrag Vhrovac
Geologist:	J. Mizwicki
LUST Incident No:	NA

Water Depth While Drilling:- Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-37

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 04/12/2001

Date End: 04/12/2001

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
-	0%					No recovery	
			3				
6	90%			SM		Gray and black well-sorted fine-grained silty SAND Loose, Moist	No visual Petroleum odor
			6				
4	100%			SM		Brown well-sorted fine-grained silty SAND Loose, Wet	No visual No odor
			9			Boring terminated at 9 feet	
			12				
			15				
			18				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig:	SIMCO EarthProbe 200
Driller:	Predrag Vhrovac
Geologist:	J. Mizwicki
LUST Incident No:	NA

Water Depth While Drilling:- Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-38

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 04/12/2001

Date End: 04/12/2001

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
-	0%		0			No recovery	
			3				
15	80%			SM		Gray and black well-sorted fine-grained silty SAND Loose, Moist	No visual No odor
			6				
5	90%			SM		Brown well-sorted fine-grained silty SAND Loose, Wet	
			9			Boring terminated at 9 feet	
			12				
			15				
			18				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig:	SIMCO EarthProbe 200
Driller:	Predrag Vhrovac
Geologist:	J. Mizwicki
LUST Incident No:	NA

Water Depth While Drilling: 6.5' Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-39

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 04/12/2001

Date End: 04/12/2001

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Asphalt		ASPHALT with gravel base	
9	50%		3	SM		Gray and black well-sorted fine-grained silty SAND and some fine to medium-grained gravel Loose, Moist	
404	90%		6	SM		Brown well-sorted fine-grained silty SAND Loose, Moist Wet at 6'-10'	No visual No odor
1	100%		9				
2	100%		12	CL		Gray and brown silty CLAY Soft, Wet Medium firm at 11'-12'	
						Boring terminated at 12 feet	
			15				
			18				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig:	SIMCO EarthProbe 200
Driller:	Predrag Vhrovac
Geologist:	J. Mizwicki
LUST Incident No:	NA

Water Depth While Drilling: 6' Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-40

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 04/12/2001

Date End: 04/12/2001

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Asphalt		ASPHALT with gravel base	
1	70%		3	SM		Gray and black well-sorted fine-grained silty SAND Loose, Moist	
83	90%		6	SM		Gray and black well-sorted fine-grained silty SAND Loose, Moist	No visual No odor
29	100%		9	SM		Brown well-sorted fine-grained silty SAND Loose, Wet	
6	90%		12	CL		Gray and brown silty CLAY Soft, Wet	
						Boring terminated at 12 feet	
			15				
			18				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig:	SIMCO EarthProbe 200
Driller:	Predrag Vhrovac
Geologist:	J. Mizwicki
LUST Incident No:	NA

Water Depth While Drilling: 6' Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-41

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 04/12/2001

Date End: 04/12/2001

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Asphalt		ASPHALT with gravel base	
2	50%		3	Fill		Bricks and cinders with some black silty sand FILL Loose, Moist	
92	90%		6	SM		Gray and black well-sorted fine-grained silty SAND Loose, Moist	No visual No odor
28	90%			SM		Brown well-sorted fine-grained silty SAND Loose, Wet	
11	90%		9	CL		Gray and brown silty CLAY Soft, Wet Firm at 11'-12'	
			12			Boring terminated at 12 feet	
			15				
			18				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig:	SIMCO EarthProbe 200
Driller:	Predrag Vhrovac
Geologist:	J. Mizwicki
LUST Incident No:	NA

Water Depth While Drilling: 7' Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-42

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 04/12/2001

Date End: 04/12/2001

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Asphalt		ASPHALT with gravel base	
5	50%			SM		Gray and black well-sorted fine-grained silty SAND Loose, Moist	
			3				
138	90%			SM		Gray and black well-sorted fine-grained silty SAND Loose, Moist	
			6				No visual No odor
48	90%			SM		Brown well-sorted fine-grained silty SAND Loose, Wet	
			9				
11	90%			CL		Gray and brown silty CLAY Firm, Wet	
			12			Boring terminated at 12 feet	
			15				
			18				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig: SIMCO EarthProbe 200

Driller: Predrag Vhrovac

Geologist: J. Mizwicki

LUST Incident No: NA

Water Depth While Drilling: 6.5' Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-43

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 04/12/2001

Date End: 04/12/2001

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Asphalt		ASPHALT with gravel base	No visual No odor
3	75%			SM		Gray and black well-sorted fine-grained silty SAND Loose, Moist	
			3				
7	90%			SM		Gray and black well-sorted fine-grained silty SAND Loose, Moist	
			6				
11	90%			SM		Brown well-sorted fine-grained silty SAND Loose, Wet	
			9				
4	90%						
				CL		Gray and brown silty CLAY Soft to firm, Wet	
			12			Boring terminated at 12 feet	
			15				
			18				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig:	SIMCO EarthProbe 200
Driller:	Predrag Vhrovac
Geologist:	J. Mizwicki
LUST Incident No:	NA

Water Depth While Drilling:- Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-44

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 04/12/2001

Date End: 04/12/2001

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Asphalt		ASPHALT with gravel base	
<1	75%			Fill		Bricks and cinders Dry	
			3				
<1	100%						
				SM		Gray and black well-sorted fine-grained silty SAND Loose, Moist	No visual No odor
			6				
22	90%			SM		Brown and black well-sorted fine-grained silty SAND Loose, Moist	
			9				
1	75%			CL		Gray silty CLAY Soft, Wet Medium firm at 11.5'-12'	
			12			Boring terminated at 12 feet	
			15				
			18				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig:	SIMCO EarthProbe 200
Driller:	Predrag Vhrovac
Geologist:	J. Mizwicki
LUST Incident No:	NA

Water Depth While Drilling:10' Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-45

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 04/12/2001

Date End: 04/12/2001

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Asphalt		ASPHALT with gravel base	
<1	75%			Fill		Bricks and cinders Dry	
			3				
<1	100%						
				SM		Gray and black well-sorted fine-grained silty SAND Loose, Moist	No visual No odor
			6				
11	90%					Brown and black well-sorted fine-grained silty SAND Loose, Moist	
			9	SM			
10	75%						
			12	CL		Gray silty CLAY Soft, Wet Boring terminated at 12 feet	
			15				
			18				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig: SIMCO EarthProbe 200

Driller: Predrag Vhrovac

Geologist: J. Mizwicki

LUST Incident No: NA

Water Depth While Drilling: 11.5' Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-46

Site: 900 W. 18th Street, Chicago, Illinois

Date Begin: 5/10/01

Date End: 5/10/01

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		Concrete	
2	60%			Fill		Crushed limestone FILL Loose, Moist	
			3				
1	75%			Fill		Crushed limestone FILL and black to medium-tan sand Loose, Moist	No visual, No odor
			6				
10	100%						
			9	SW		Black and tan well-sorted medium-grained SAND Dense, Wet	
11	100%						No visual, No odor
				CL		Brown and gray silty CLAY with trace fine-grained sand *Firm, Moist*	
			12			Boring terminated @ 12'	
			15				
			18				

Completion Notes:
Hatch pattern denotes sample analyzed.

Drill Rig:	SIMCO Earthprobe 200
Driller:	Predrag Vrhovac
Geologist:	Jim Mizwicki
LUST Incident No:	NA

Water Depth While Drilling: 9' Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-47

Site: 900 W. 18th Street, Chicago, Illinois

Date Begin: 5/10/01

Date End: 5/10/01

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		Concrete	
2	50%		3	Fill		Crushed limestone FILL Loose, Moist	
5	100%		6	Fill		Crushed limestone FILL and black to medium-tan sand Loose, Moist	No visual, No odor
17	100%		9	SW		Black and tan well-sorted medium-grained SAND Dense, Wet	
11	80%		12	CL		Brown and gray silty CLAY *with trace fine-grained sand* Firm, Moist	No visual, No odor
						Boring terminated @ 12'	
			15				
			18				

Completion Notes:
Hatch pattern denotes sample analyzed.

Drill Rig:	SIMCO Earthprobe 200
Driller:	Predrag Vrhovac
Geologist:	Jim Mizwicki
LUST Incident No:	NA

Water Depth While Drilling: 9' Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-48

Site: 900 W. 18th Street, Chicago, Illinois

Date Begin: 5/10/01

Date End: 5/10/01

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		Concrete	
6	60%			Fill		Crushed limestone FILL Loose, Moist	
			3				
4	75%			Fill		Crushed limestone FILL and black to medium-tan sand Loose, Moist	No visual, No odor
			6				
14	100%						
			9	SW		Black and tan well-sorted medium-grained SAND Dense, Wet	
25	80%			CL		Brown and gray silty CLAY with trace fine-grained sand Firm, Moist	No visual, No odor
			12			Boring terminated @ 12'	
			15				
			18				

Completion Notes:
Hatch pattern denotes sample analyzed.

Drill Rig: SIMCO Earthprobe 200

Driller: Predrag Vrhovac

Geologist: Jim Mizwicki

LUST Incident No: NA

Water Depth While Drilling: 9' Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-49

Site: 900 W. 18th Street, Chicago, Illinois

Date Begin: 5/10/01

Date End: 5/10/01

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		Concrete	
6	75%			Fill		*Crushed limestone FILL* Loose, Moist	
			3				No visual, No odor
13	75%			Fill		Crushed limestone FILL and black to medium-tan sand Loose, Moist	
			6	SC		Black clayey SAND grading to black sandy CLAY Firm, Moist	
29	100%						
				SM		Brown well-sorted medium-grained SAND Dense, Wet	
			9				
15	100%			CL		Brown and gray sandy CLAY with trace fine-grained sand Firm, Wet	No visual, No odor
			12			Boring terminated @ 12'	
			15				
			18				

Completion Notes:
Hatch pattern denotes sample analyzed.

Drill Rig:	SIMCO Earthprobe 200
Driller:	Predrag Vrhovac
Geologist:	Jim Mizwicki
LUST Incident No:	NA

Water Depth While Drilling: 8' Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-50

Site: 900 W. 18th Street, Chicago, Illinois

Date Begin: 5/10/01

Date End: 5/10/01

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		Concrete	
7	100%			Fill		Crushed limestone FILL Loose, Moist	
			3				No visual, No odor
7	100%			Fill		Crushed limestone FILL and black to medium-tan sand Loose, Moist	
			6				
12	100%						
			9				
12	100%			SW		Black and tan well-sorted medium-grained SAND Dense, Wet	No visual, No odor
				CL		Brown and gray silty CLAY with trace fine-grained sand Firm, Moist	
			12			Boring terminated @ 12'	
			15				
			18				

Completion Notes:
Hatch pattern denotes sample analyzed.

Drill Rig:	SIMCO Earthprobe 200
Driller:	Predrag Vrhovac
Geologist:	Jim Mizwicki
LUST Incident No:	NA

Water Depth While Drilling: 8' Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-51

Site: 900 W. 18th Street, Chicago, Illinois

Date Begin: 5/10/01

Date End: 5/10/01

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		Concrete	
10	90%		3	Fill		Crushed limestone FILL Loose, Moist	
8	90%		6	Fill		Crushed limestone FILL and black to medium-tan sand Loose, Moist	No visual, No odor
11	100%		9	SC		Black clayey SAND grading to black sandy CLAY Firm, Moist	
9	100%		12	SM		Brown well-sorted medium-grained SAND Dense, Wet	No visual, No odor
			15	CL		Brown and gray sandy CLAY with trace fine-grained sand Firm, Wet	
			18			Boring terminated @ 12'	

Completion Notes:
Hatch patterns denote sample analyzed.

Drill Rig:	SIMCO Earthprobe 200
Driller:	Predrag Vrhovac
Geologist:	Jim Mizwicki
LUST Incident No:	NA

Water Depth While Drilling: 8' Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-52

Site: 900 W. 18th Street, Chicago, Illinois

Date Begin: 5/11/01

Date End: 5/11/01

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		Concrete	
1	100%			Fill		Crushed limestone FILL Loose, Moist	
			3				No visual, No odor
12	100%			Fill		Crushed limestone FILL and black to medium-tan sand Loose, Moist	
			6				
5	100%						
				SW		Black and tan well-sorted medium-grained SAND Dense, Wet Boring terminated @ 9'	No visual, No odor
			9				
			12				
			15				
			18				

Completion Notes:
Hatch pattern denotes sample analyzed.

Drill Rig:	SIMCO Earthprobe 200
Driller:	Predrag Vrhovac
Geologist:	Jim Mizwicki
LUST Incident No:	NA

Water Depth While Drilling: 8' Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-53

Site: 900 W. 18th Street, Chicago, Illinois

Date Begin: 5/11/01

Date End: 5/11/01

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		Concrete	
<1	100%			Fill		Crushed limestone FILL Loose, Moist	
			3				No visual, No odor
10	100%					Crushed limestone FILL and black to medium-tan sand Loose, Moist	
			6	Fill			
30	100%						
			9				No visual, No odor
						Boring terminated @ 9'	
			12				
			15				
			18				

Completion Notes:
Hatch pattern denotes sample analyzed.

Drill Rig:	SIMCO Earthprobe 200
Driller:	Predrag Vrhovac
Geologist:	Jim Mizwicki
LUST Incident No:	NA

Water Depth While Drilling: 8' Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-54

Site: 900 W. 18th Street, Chicago, Illinois

Date Begin: 5/11/01

Date End: 5/11/01

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		Concrete	
5	100%			Fill		Crushed limestone FILL Loose, Moist	
			3				No visual, No odor
11	100%			Fill		Crushed limestone FILL and black to medium-tan sand Loose, Moist	
			6				
3	100%						No visual, No odor
			9			Boring terminated @ 9'	
			12				
			15				
			18				

Completion Notes:
Hatch pattern denotes sample analyzed.

Drill Rig: SIMCO Earthprobe 200

Driller: Predrag Vrhovac

Geologist: Jim Mizwicki

LUST Incident No: NA

Water Depth While Drilling:8' Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-55

Site: 900 W. 18th Street, Chicago, Illinois

Date Begin: 5/11/01

Date End: 5/11/01

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		Concrete	
<1	100%			Fill		Crushed limestone FILL Loose, Moist	
			3				No visual, No odor
<1	100%					Crushed limestone FILL and black to medium-tan sand Loose, Moist	
			6	Fill			
13	100%						No visual, No odor
			9			Boring terminated @ 9'	
			12				
			15				
			18				

Completion Notes:
Hatch pattern denotes sample analyzed.

Drill Rig:	SIMCO Earthprobe 200
Driller:	Predrag Vrhovac
Geologist:	Jim Mizwicki
LUST Incident No:	NA

Water Depth While Drilling:8' Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-56

Site: 900 W. 18th Street, Chicago, Illinois

Date Begin: 5/25/01

Date End: 5/25/01

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		Concrete	
1	100%			Fill		Crushed limestone FILL Loose, Moist	
			3				No visual, No odor
<1	100%					Crushed limestone FILL and black to medium-tan sand Loose, Moist	
			6	Fill			
22	100%						No visual, No odor
			9			Boring terminated @ 9'	
			12				
			15				
			18				

Completion Notes:
Hatch pattern denotes sample analyzed.

Drill Rig:	SIMCO Earthprobe 200
Driller:	Predrag Vrhovac
Geologist:	Jim Mizwicki
LUST Incident No:	NA

Water Depth While Drilling:NA Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-57

Site: 900 W. 18th Street, Chicago, Illinois

Date Begin: 5/25/01

Date End: 5/25/01

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		Concrete	
5	80%			Fill		Crushed limestone FILL Loose, Moist	
			3				No visual, No odor
7	100%					Crushed limestone FILL and black to medium-tan sand Loose, Moist	
			6	Fill			
4	100%						No visual, No odor
			9			Boring terminated @ 9'	
			12				
			15				
			18				

Completion Notes:
Hatch pattern denotes sample analyzed.

Drill Rig: SIMCO Earthprobe 200

Driller: Predrag Vrhovac

Geologist: Jim Mizwicki

LUST Incident No: NA

Water Depth While Drilling:NA Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-58

Site: 900 W. 18th Street, Chicago, Illinois

Date Begin: 5/25/01

Date End: 5/25/01

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		Concrete	
3	100%			Fill		Crushed limestone FILL Loose, Moist	
			3				No visual, No odor
6	100%			Fill		Crushed limestone FILL and black to medium-tan sand Loose, Moist	
			6				
3	80%			SC		Black clayey SAND grading to black sandy CLAY Firm, Moist	
				CL		Brown sandy CLAY Soft, Moist	No visual, No odor
			9			Boring terminated @ 9'	
			12				
			15				
			18				

Completion Notes:
Hatch pattern denotes sample analyzed.

Drill Rig:	SIMCO Earthprobe 200
Driller:	Predrag Vrhovac
Geologist:	Jim Mizwicki
LUST Incident No:	NA

Water Depth While Drilling:NA Water Depth After Drilling: NA

Project Number: 00868D Page 1

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-59

Site: 900 W. 18th Street, Chicago, Illinois

Date Begin: 5/25/01

Date End: 5/25/01

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		Concrete	
3	50%			Fill		Crushed limestone FILL Loose, Moist	
			3				No visual, No odor
17	100%			Fill		Crushed limestone FILL and black to medium-tan sand Loose, Moist	
			6	SC		Black clayey SAND grading to black sandy CLAY Firm, Moist	
7	80%			CL		Brown sandy CLAY Soft, Moist	No visual, No odor
			9			Boring terminated @ 9'	
			12				
			15				
			18				

Completion Notes:
Hatch pattern denotes sample analyzed.

Drill Rig:	SIMCO Earthprobe 200
Driller:	Predrag Vrhovac
Geologist:	Jim Mizwicki
LUST Incident No:	NA

Water Depth While Drilling: NA Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-60

Site: 900 W. 18th Street, Chicago, Illinois

Date Begin: 06/05/01

Date End: 06/05/01

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		Concrete	
2	75%			Fill		Crushed limestone FILL Loose, Moist	
			3				No visual, No odor
5	100%			Fill		Crushed limestone FILL and black to medium-tan sand Loose, Moist	
			6	SC		Black clayey SAND grading to black sandy CLAY Firm, Moist	
27	100%			CL		Brown sandy CLAY Soft, Moist	No visual, No odor
			9			Boring terminated @ 9'	
			12				
			15				
			18				

Completion Notes:
Hatch pattern denotes sample analyzed.

Drill Rig: SIMCO Earthprobe 200

Driller: Predrag Vrhovac

Geologist: Jim Mizwicki

LUST Incident No: NA

Water Depth While Drilling: NA Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-61

Site: 900 W. 18th Street, Chicago, Illinois

Date Begin: 06/05/01

Date End: 06/05/01

FID (ppm)	Sample Recovery	Sample	Depth Feet	Soil Class	Lithology	Description	Notes
				Concrete		Concrete	
3	75%			Fill		Crushed limestone FILL Loose, Moist	
			3				No visual, No odor
6	100%			Fill		Crushed limestone FILL and black to medium-tan sand Loose, Moist	
			6	SC		Black clayey SAND grading to black sandy CLAY Firm, Moist	
37	100%			CL		Brown sandy CLAY Soft, Moist	No visual, No odor
			9			Boring terminated @ 9'	
			12				
			15				
			18				

Completion Notes:
Hatch pattern denotes sample analyzed.

Drill Rig:	SIMCO Earthprobe 200
Driller:	Predrag Vrhovac
Geologist:	Jim Mizwicki
LUST Incident No:	NA

Water Depth While Drilling: NA Water Depth After Drilling: NA

Project Number: 00868D

Page 1

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-62

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 06/05/2001

Date End: 06/05/2001

FID (ppm)	Sample Recovery	Sample	Depth	Soil Class	Lithology	Description	Notes
				Concrete		Concrete	
3	50%			Fill		Crushed limestone FILL Loose, Moist	No Odor
			3				
1	100%			SM		Brown silty SAND Loose, Moist	
			6				
4	100%			OL		Brown clayey SILT Soft, Moist	No Visual
			9			Boring terminated at 9 feet	
			12				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig:	SIMCO EarthProbe 200
Driller:	Predrag Vhrovac
Geologist:	J. Mizwicki
LUST Incident No:	NA

Water Depth While Drilling:NA Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-63

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 06/05/2001

Date End: 06/05/2001

FID (ppm)	Sample Recovery	Sample	Depth	Soil Class	Lithology	Description	Notes
				Concrete		Concrete	
1	75%			Fill		Crushed limestone FILL Loose, Moist	No Odor
			3				
1	100%			SM		Brown silty SAND Loose, Moist	
			6				
4	100%			OL		Brown clayey SILT Soft, Moist	No Visual
			9			Boring terminated at 9 feet	
			12				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig: SIMCO EarthProbe 200

Driller: Predrag Vhrovac

Geologist: J. Mizwicki

LUST Incident No: NA

Water Depth While Drilling: NA Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-64

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 06/05/2001

Date End: 06/05/2001

FID (ppm)	Sample Recovery	Sample	Depth	Soil Class	Lithology	Description	Notes
				Concrete		Concrete	
1	50%			Fill		Crushed limestone FILL Loose, Moist	No Odor
			3				
3	70%			SM		Brown silty SAND Loose, Moist	
			6				
2917	100%			OL		Brown clayey SILT Soft, Moist	No Visual
			9			Boring terminated at 9 feet	
			12				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig: SIMCO EarthProbe 200

Driller: Predrag Vhrovac

Geologist: J. Mizwicki

LUST Incident No: NA

Water Depth While Drilling:NA Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-65

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 06/05/2001

Date End: 06/05/2001

FID (ppm)	Sample Recovery	Sample	Depth	Soil Class	Lithology	Description	Notes
				Concrete		Concrete	
1	50%			Fill		Crushed limestone FILL Loose, Moist	No odor No Visual
			3				
5	70%			SM		Brown silty SAND with some gravel Loose, Moist	
			6				
1237	100%			OL		Brown clayey SILT Soft, Moist	Strong Petroleum odor
			9			Boring terminated at 9 feet	
			12				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig:	SIMCO EarthProbe 200
Driller:	Predrag Vhrovac
Geologist:	J. Mizwicki
LUST Incident No:	NA

Water Depth While Drilling:NA Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-66

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 06/05/2001

Date End: 06/05/2001

FID (ppm)	Sample Recovery	Sample	Depth	Soil Class	Lithology	Description	Notes
				Concrete		Concrete	
4	75%		3	Fill		Crushed limestone FILL Loose, Moist	No odor No Visual
20	100%		6	SM		Brown silty SAND with some gravel Loose, Moist	
5554	100%		9	OL		Brown clayey SILT Soft, Moist	Strong petroleum odor
			12			Boring terminated at 9 feet	

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig: SIMCO EarthProbe 200

Driller: Predrag Vhrovac

Geologist: J. Mizwicki

LUST Incident No: NA

Water Depth While Drilling:NA Water Depth After Drilling: NA

Project Number: 00868D

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-67

Site: 900 West 18th Street, Chicago, Illinois

Date Begin: 06/05/2001

Date End: 06/05/2001

FID (ppm)	Sample Recovery	Sample	Depth	Soil Class	Lithology	Description	Notes
				Concrete		Concrete	
1	75%			Fill		Crushed limestone FILL Loose, Moist	No odor
			3				
4	100%			SM		Brown silty SAND with some gravel Loose, Moist	No Visual
			6			Boring terminated at 6 feet	
			9				
			12				

Completion Notes:
Hatched pattern denotes sample analyzed.

Drill Rig: SIMCO EarthProbe 200

Driller: Predrag Vhrovac

Geologist: J. Mizwicki

LUST Incident No: NA

Water Depth While Drilling:NA Water Depth After Drilling: NA

Project Number: 00868D

PIONEER
ENVIRONMENTAL, INC.
1000 North Halsted Chicago, Illinois 60622

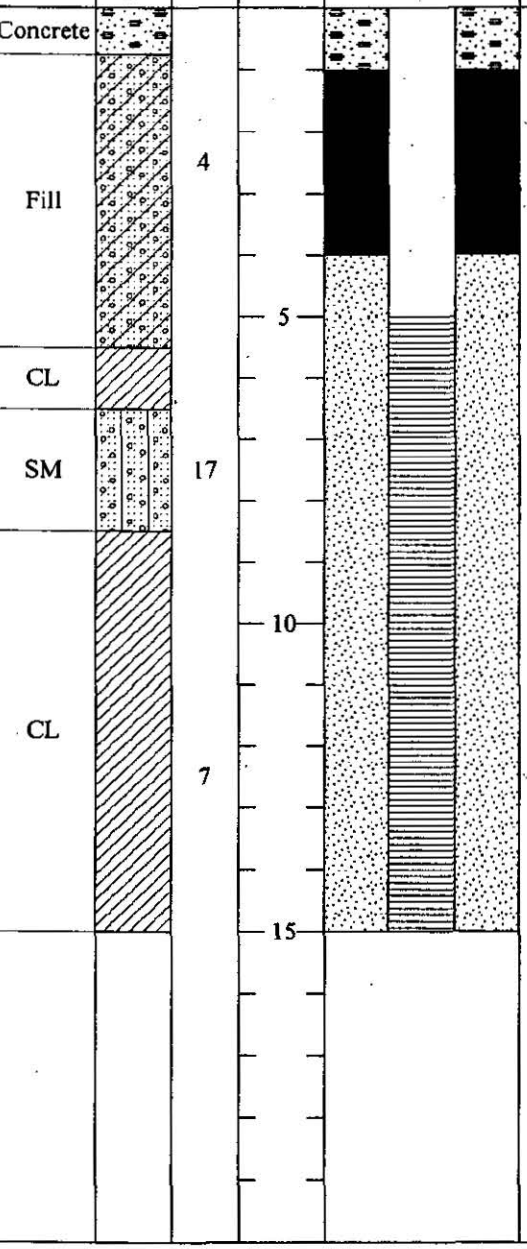
Groundwater Monitoring Well Completion Report

Site:
900 West 18th Street
Chicago, Illinois

Groundwater Monitoring Well ID:
MW-1

Project Number:	00868D	Top of Inner Casing:	99.69
Geologist:	C. Simpson	Ground elevation:	NA
Date Drilled:	03/09/2001	Total Deph of Borehole	15'
Borehole Diameter:	8.25"	Depth to Water:	5'

Soil Description	Soil Class	FID	Depth	Annulus Material
Concrete	Concrete			Flush mount well cover with concrete vault
Crushed limestone FILL Loose, Moist	Fill	4		Medium bentonite
Gray medium-grained sandy CLAY Soft, Moist	CL		5	
Brown medium-coarse silty SAND Loose, Wet	SM	17		
Gray medium-grained sandy CLAY Soft, Wet	CL	7	10	#5 Quartz sand
Boring terminated at 15'			15	



Notes: Well constructed using 2" Schedule 80 PVC casing and 2" .010" slot PVC riser.

C:\Program Files\Well Logger 2.7\00868C 900 W 18th street.wl2

PIONEER
ENVIRONMENTAL, INC.
1000 North Halsted Chicago, Illinois 60622

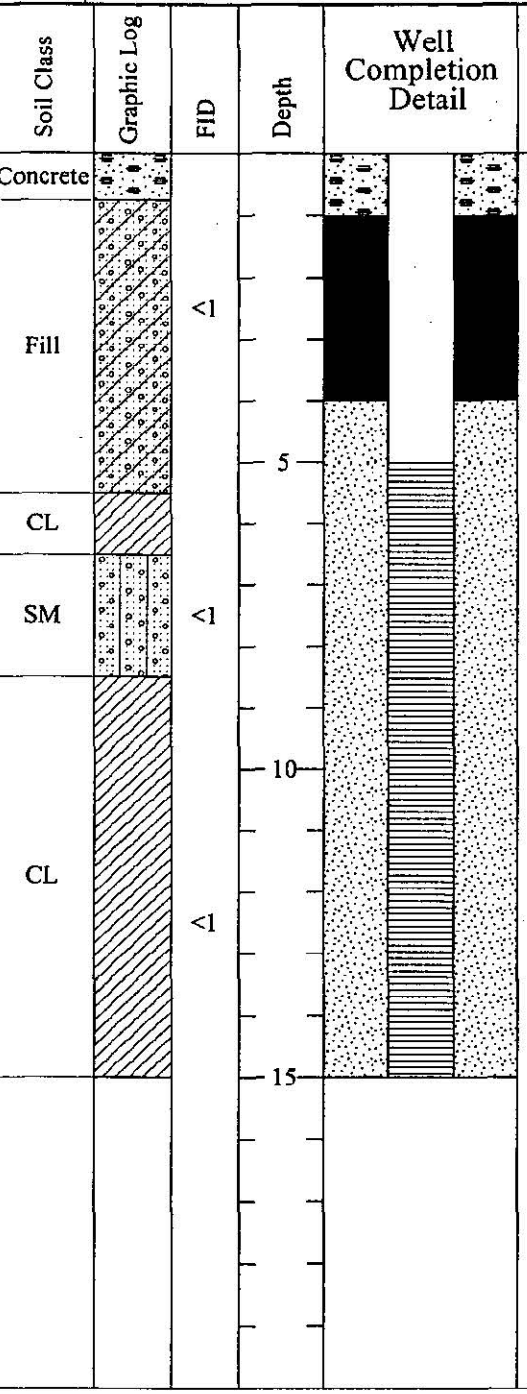
Groundwater Monitoring Well Completion Report

Site:
900 West 18th Street
Chicago, Illinois

Groundwater Monitoring Well ID:
MW-2

Project Number:	00868D	Top of Inner Casing:	101.13
Geologist:	C. Simpson	Ground elevation:	NA
Date Drilled:	03/09/2001	Total Deph of Borehole	15'
Borehole Diameter:	8.25"	Depth to Water:	6'

Soil Description	Soil Class	FID	Annulus Material
Concrete	Concrete		Flush mount well cover with concrete vault
Crushed limestone FILL Loose, Moist	Fill	<1	Medium bentonite
Gray medium-grained sandy CLAY Soft, Moist	CL		
Brown medium-coarse silty SAND Loose, Wet	SM	<1	
Gray medium-grained sandy CLAY Soft, Wet	CL	<1	#5 Quartz sand
Boring terminated at 15'			



Notes: Well constructed using 2" Schedule 80 PVC casing and 2" .010" slot PVC riser.

C:\Program Files\Well Logger 2.7\00868C 900 W 18th street.wl2

PIONEER
ENVIRONMENTAL, INC.
1000 North Halsted Chicago, Illinois 60622

Groundwater Monitoring Well Completion Report

Site:
900 West 18th Street
Chicago, Illinois

Groundwater Monitoring Well ID:
MW-3

Project Number:	00868D	Top of Inner Casing:	99.7
Geologist:	C. Simpson	Ground elevation:	NA
Date Drilled:	03/09/2001	Total Deph of Borehole	15'
Borehole Diameter:	8.25"	Depth to Water:	5'

Soil Description	Soil Class	Graphic Log	FID	Depth	Well Completion Detail	Annulus Material
Concrete	Concrete					Flush mount well cover with concrete vault
Crushed limestone FILL Loose, Moist	Fill		<1	5		Medium bentonite
Gray medium-grained sandy CLAY Soft, Moist	CL					
Brown medium-coarse silty SAND Loose, Wet	SM		<1			
Gray medium-grained sandy CLAY Soft, Wet	CL		<1	10		#5 Quartz sand
Boring terminated at 15'				15		

Notes: Well constructed using 2" Schedule 80 PVC casing and 2" .010" slot PVC riser.

C:\Program Files\Well Logger 2.7\00868C 900 W 18th street.wl2

PIONEER
ENVIRONMENTAL, INC.
1000 North Halsted Chicago, Illinois 60622

Groundwater Monitoring Well Completion Report

Site:
900 West 18th Street
Chicago, Illinois

Groundwater Monitoring Well ID:
MW-4

Project Number:	00868D	Top of Inner Casing:	98.5
Geologist:	C. Simpson	Ground elevation:	NA
Date Drilled:	03/09/2001	Total Deph of Borehole	15'
Borehole Diameter:	8.25"	Depth to Water:	3'

Soil Description	Soil Class	FID	Depth	Well Completion Detail	Annulus Material
Concrete	Concrete				Flush mount well cover with concrete vault
Crushed limestone FILL Loose, Moist	Fill	<1	5		Medium bentonite
		3.2			
Gray medium-grained sandy CLAY Soft, Wet	CL	17	10		#5 Quartz sand
Boring terminated at 15'			15		

Notes: Well constructed using 2" Schedule 80 PVC casing and 2" .010" slot PVC riser.

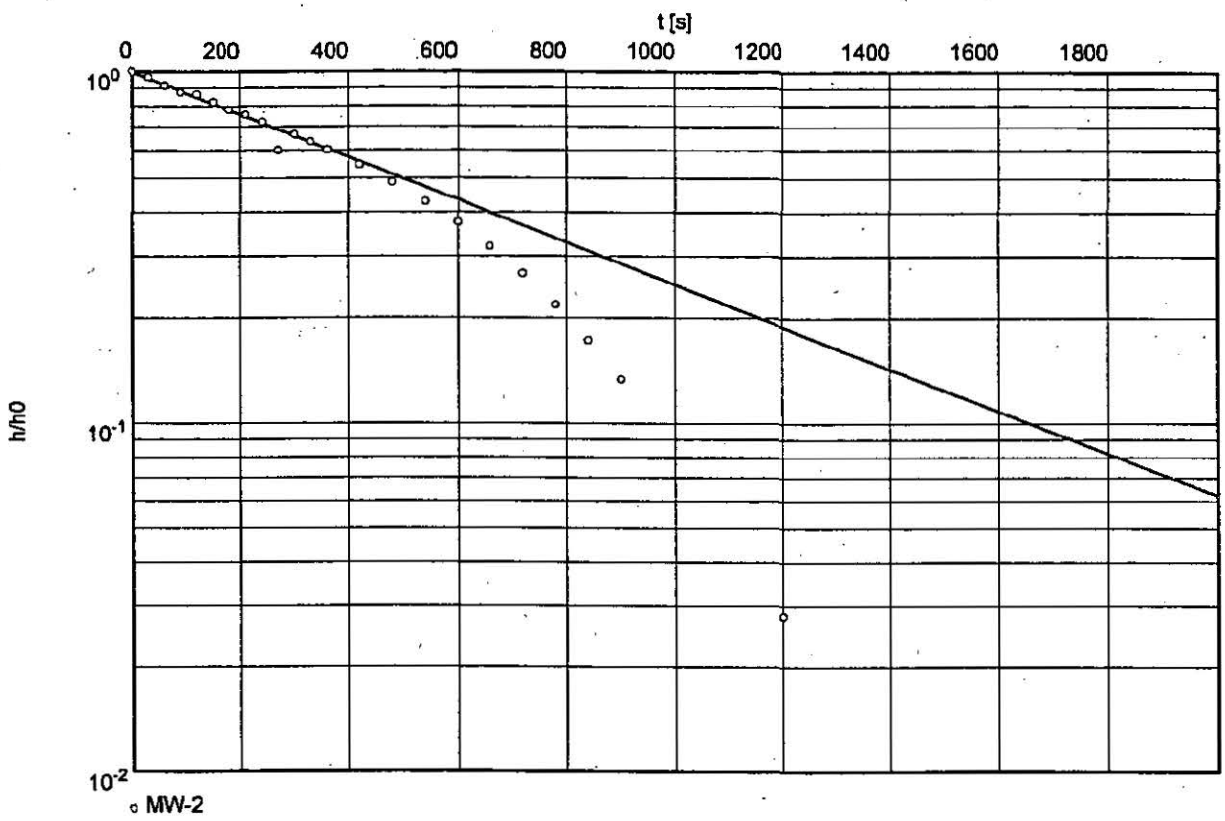
C:\Program Files\Well Logger 2.7\00868C 900 W 18th street.wlz

APPENDIX F:

SLUG TEST DATA

Pioneer Environmental, Inc. 1000 N. Halsted Chicago, Illinois (312) 587-1021	slug/bail test analysis BOUWER-RICE's method	Page 1 Project: 900 W. 18th Street Evaluated by: C. Simpson

Slug Test No. Bail Down	Test conducted on: 3-15-01
MW-2	



Hydraulic conductivity [cm/s]: 3.75×10^{-5}

Pioneer Environmental, Inc. 1000 N. Halsted Chicago, Illinois (312) 587-1021	slug/bail test analysis BOUWER-RICE's method	Page 2
		Project: 900 W. 18th Street
		Evaluated by: C. Simpson

Slug Test No. Bail Down	Test conducted on: 3-15-01
MW-2	MW-2

Static water level: 193.5 cm below datum

	Pumping test duration [s]	Water level [cm]	Drawdown [cm]	
1	0	433.4	239.9	
2	30	425.2	231.6	
3	60	413.0	219.5	
4	90	403.6	210.0	
5	120	400.8	207.3	
6	150	390.4	196.9	
7	180	381.3	187.8	
8	210	375.2	181.7	
9	240	366.7	173.1	
10	270	337.7	144.2	
11	300	353.3	159.7	
12	330	345.9	152.4	
13	360	338.0	144.5	
14	420	324.3	130.8	
15	480	310.3	116.7	
16	540	296.6	103.0	
17	600	283.5	89.9	
18	660	270.4	76.8	
19	720	257.9	64.3	
20	780	246.0	52.4	
21	840	235.0	41.5	
22	900	225.6	32.0	
23	1200	200.3	6.7	